

Fig. 1

ACCATGTAGCGGCCCTGGCGCTCGCTCGCTCACTGAGGCCGCCGGGCAAGCCGGGCGTCGGGCGACCTTTGGT  
 CGCCCGGCCCTCAGTGAGCGAGCGAGCGCGCAGAGAGGGAGTGGCCAATCCATCACTAGGGGTTCTTGAGTTAAT  
 GATTAAACCGCCATGCTACTTATCTACGTAGCCATGCTCTAGGGAATTGGCCGCGGAATTTGACTCTAGGCCATTG  
 CATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGACATTGATT  
 ATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAAC  
 TTACGTAATAGGCCCGCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGACGTATGTTCCATA  
 GTAAGCCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTACGGTAACTGCCCACTTGGCAGTACATCA  
 AGTGATCATATGCCAAGTCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCTGGCATTATGCCAGTACA  
 TGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGG  
 CAGTACACCAATGGGCGTGGATAGCGGTTTGACTCACGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG  
 TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAATGTCTGAATAACCCCGCCCGTTGACGCAATGGGCGGTA  
 GCGGTGACGTGGGAGGTCATATAAGCAGAGCTCGTTTGTGAACCGTCAGATCGCTGGAGACGCCATCCACGC  
 TGTTTTGACCTCCATAGAGACACCGGGACCGATCCAGCCTCCGCGGCCGGGAACGGTGATTGGAACGCGGATTCC  
 CCGTGCAAGAGTGACGTAAGTACCGCTATAGACTCTATAGGCACACCCCTTGGCTCTTATGATGCTATACTGT  
 TTTTGGCTTGGGGCTATACACCCCGCTCTTATGCTATAGGTGATGGTATAGCTTAGCCTATAGGTGTGGGTAT  
 TGACCATTATTGACCACTCCCTATTGGTGACGATACTTCCATTACTAATCCATAACATGGCTCTTTGCCCAACT  
 ATCTCTATTGGCTATATGCCAATACTCTGTCTTCAGAGACTGACACGACTCTGTATTTTACAGGATGGGTCCA  
 TTTATTATTACAAATTCACATATAACAACGCGTCCCGCGTCCCGCAGTTTTTATTAACATAGCGTGGGATC  
 TCCGACATCTCGGTACGTGTTCCGGACATGGGCTCTTCTCGGTAGCGGCGGAGCTTCACATCCGAGCCTGGTC  
 CCATCCGTCAGCGGTCTATGTCGCTCGGCAGCTCCTTGCTCTAACAGTGGAGGCCAGACTTAGGCACAGCACA  
 TGCCCAACCAACCACTGTCGCGCACAGGCGTGGCGGTAGGTATGTGTCTGAAAATGAGCTCGGAGATTGGGCT  
 CGCACCTGGACGAGATGGAAGACTTAAGGCAGCGGCAGAGAAGATGCAGGCAGCTGAGTTGTTGATTCTGATAA  
 GAGTCAGAGGTAATCCCGTTGCGGTGCTGTTAACGTTGGAGGCGAGTGTAGTCTGAGCAGTACTCGTTGCTCCGC  
 GCGGCCCAACAGACATAATAGCTGACAGACTAACAGACTGTTCCTTCCATGGGTCTTTTCTGAGTACCGTCGTC  
 GACCTAAGAATTGAGGCTTAAGCTTCTAGGTATCGATCTGAGCAAGTCTAGAGGAGACCAACGCTTCCCTC  
 TAGCGGGATCAATCCGCCCCCCCCCTAACGTTACTGGCCGAAGCGCTTGAATAAGGCGGCTGCGGTTTGTCT  
 ATATGTTATTTCCACCATATTGCGCTCTTTTGGCAATGTGAGGGCCCGGAACCTGGCCCTGTCTTCTGACGAGC  
 ATTCCTAGGGGTCTTTCCCTCTCGCCAAGGAATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCTCTGGA  
 AGCTTCTTGAAGACAAACAGTCTGTAGCGACCTTTGACGGCAGCGGAACCCCACTGGGACAGGTGCCCTCT  
 GCGGCCAAAAGCCAGGTGTATAAGATACCTGCAAGGCGGCACAACCCAGTGCCAGTTGTGAGTTGGATAGTT  
 GTGGAAGAGTCAATGGCTCTCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCAGAAGTACCCATTGTAT  
 GGGATCTGATCTGGGGCTCGGTGCACATGCTTACATGTGTTAGTCGAGGTTAAAAAACGCTAGGCCCCCGA  
 ACCACGGGAGCTGGTTTTCTTTGAAAAACAGGATAATACATGGCCGCGGAGCATCACACGCTGCCAGCCCT  
 GCCGAGGACGCGGAGCGGCGCTTTCCGCGGGCCACTTCAAGGACCCCAAGCGGCTGTACTGCAAGAACGGGG  
 GCTTCTTCTGCGCATCCACCCGACGCGCGAGTGACGGGGTCCGCGAGAAGAGCGACCCACACATCAAACACAA  
 CTTCAAGCAGAAGAGAGAGGGTTGTGCTATCAAAGGAGTGTGTGCAACCGTTACCTTGCTATGAAGAAGATGG  
 AAGATTACTAGCTTCTAAATGTGTTACAGACGAGTGTTCCTTTTGAACGATTGAGTCTAATAACTACAATCTT  
 ACCGGTCAAGGAAATACACAGTTGGTATGTGGCACTGAAACGAACGGGAGTATAAATGGATCCAAACAGGA  
 CCTGGGCGAAGGTATACTTTTCTTCAATGTCTGCTAAGAGCTGATCTAATGGCAGCATCTGATCTCATTTTA  
 CATGAAGCTGGTGGCATCCCTGTGACCCCTCCCAAGTGCCTCTCTGGCCCTGGAAGTTGCCACTCCAGTGCCACC  
 AGCCTTGCTCTAATAAAATTAAGTTGCATCATTTTGTCTGACTAGGTGCTCTCTATAATATTATGGGTGGAGGG  
 GGTGGTATGAGCAAGGGGCAAGTTGGGAAGACAACCTGTAGGGCTGCGGGGTCTATTGGGAACCAAGCTGGAGTG  
 CAGTGGCACAATCTGGCTCACTGCAATCTCCGCTCTGGGTCAAGCGATTCTCTGCTCAGCTCCCGAGTTG

Fig. 2A



TTGGGATTCCAGGCATGCATGACCAGGCTCAGCTAATTTTGTGTTTTTGGTAGAGACGGGGTTTACCATATTGGC  
CAGGCTGGTCTCCAACCTCTAATCTCAGGTGATCTACCCACCTTGGCTCCCAAATTGCTGGGATTACAGGCGTGAA  
CCACTGCTCCCTTCCCTGTCTTCTGATTTTAAATAACTATACCAGCAGGAGGACGTCCAGACACAGCATAGGCTA  
CCTGGCCATGCCAACCGGTGGGACATTGAGTTGCTTGGTGGCACTGTCCTCATGCGTTGGGTCCACTCAGTA  
GATGCTGTGTAATTATCGGATCCACTACGCGTTAGAGCTCGCTGATCAGCCTCGACTGTGCTTCTAGTTGCCAGC  
CATCTGTTGTTGCCCTCCCGTGCCTTCTTGACCTGGAAGGTGCCACTCCACTGTCTTTCTAATAAAAT  
GAGGAAATTGCATCGATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGTGGGTGGGGCAGGACAGCAAGGGGA  
GGATTGGGAAGACAATAGCAGGGGGTGGGCAAGAATCCAGCATGAGATCCCGCGCTGGAGGATCATCCAGCCA  
ATTCCTAGAGCATGGCTAGCTAGATAAGTAGCATGGCGGTTAATCATTAACTACAAGGAACCCCTAGTGATGGAG  
TTGGCACTCCCTCTCTGCGCGCTCGCTCGCTCACTGAGGCCGGGCGACCAAAGTCCGCGGACGCCGGGCTTTCG  
CCGGCGGCTCAGTGAGCGAGCGAGCGCGAGGGGTGGGCAAGAATCCAGCATGAGATCCCGCGCTGGAGGA  
TCATCCAGCGCGGCTCCGGAAAAACGATTCCGAAGCCCAACCTTTCATAGAAGGCGCGGTGAATCGAAATCTCGT  
GATGGCAGGTGGGCGTCTGTTGGTGGTCAATTCGAACCCAGAGTCCCGCTCAGAAGAACTCGTCAAGAAGCGA  
TAGAAGCGGATGCGCTGCGAATCGGAGCGCGATACCGTAAAGCAGGGAAGCGGTGAGCCATTGCGCGCCAG  
CTCTCAGCAATATCAGGGTAGCCAACTATGCTGATAGCGGTCCGCCACACCCAGCGCGCCAGTCTGATGA  
ATCCAGAAAAGCGGCATTTTCCACCATGATATTGGCAAGCAGGCATCGCATGGGTACGACGAGATCTCGCG  
TCGGCATGCGCGCTTGAGCTGGCGAACAGTTGGCTGGCGGAGCCCTGATGCTTTCGTCAGATCATCTG  
ATCGACAAGACCGGCTCCATCCGAGTACGTGCTCGCTGATGCGATGTTTCGCTTGGTGGTGAATGGCAGGTAG  
CCGGATCAAGGTATGACGCGCGCATGTCATGAGCATGATGATACTTTCGCGAGGAGCAAGTGAGATGAC  
AGGAGATCTGCGCCGCACTTCCGCCAATAGCAGCAGTCCCTTCCGCTTCAGTGAACGTCGAGCACAGTGC  
GCAAGGAACCGCGCTGTTGGCAGCCACGATAGCGCGCTGCTCGTCTGCAAGTTCATTAGGGCACCGGACAGGT  
CGGTCTTGACAAAAGAACCGGGCGCCCTGCGCTGACAGCCGAACACGGCGCATCAGAGCAGCGATTGCTGT  
TGTGCCAGTATAGCGAATAGCTCTCCACCCAGCGCGGAGAACCTGCGTGAATCCATCTGTTCAATCAT  
GCGAAACGATCTCATCTGTCTTTCATCAGATCTTGATCCCTGCGCATCAGATCTTGGCGGCAAGAAAGCCA  
TCCAGTTTACTTTGACGGGCTTCCCAACCTTACCAGAGGCGCGCCAGTGGCAATTCGGTTTCGTTGCTGTCAT  
AAAACCGCCAGCTAGCTATCGCATGTAAGCCCACTGCAAGCTACCTGCTTCTCTTTGCGCTTGGCTTTCCCT  
TGTCCAGATAGCCAGTAGCTGACATTATCCGGGTGAGCAGCTTCTGCGGACTGGCTTTTACGTGTTCCGCT  
TCCTTAGCAGCCTTGGCGCTGAGTGTGCGGCGAGGTGAAGCTGTCAATTCGCGTTAAATTTTGTAAATC  
AGCTCATTTTTAAACCAATAGGCGGAATCGGCAAAATCCCTTATAAATCAAAGAATAGCCGAGATAGGGTTGAG  
TGTGTTCCAGTTTGAACAAGAGTCCACTATTAAGAAGCTGGACTCCAAGTCAAGGGCGAAAAACCGTCTATC  
AGGGCGATGGCGGATCAGCTTATGCGGTGTAAATACCGCACAGATGCGTAAGGAGAAAAACCGCATCAGGCGCTC  
TTCGCTTCTCGCTCACTGACTCGCTGCGCTCGTCTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGG  
TAATACGGTTATCCACAGAAATCAGGGGATAACGCAGGAAAGAACATGTAGCAAAAGGCCAGCAAAAGGCCAGGAAC  
CGTAAAAAGGCGCGTTGCTGGCGTTTTTCATAGGCTCCGCCCCCTGACGAGCATCAGAAAAATCGACGCTCAAG  
TCAGAGGTGGGAAACCCGACAGGACTATAAGATACAGGCGTTTTCCCTGGAAGCTCCCTGTCGCTCTCCTG  
TTCCGACCTCGCGCTTACCGGATACCTGTCCGCTTCTCCCTCGGGAAGCGTGGCGCTTTCATAGCTCAGC  
GTAGGTATCTCAGTTGCGTGTAGGTGCTGCTCCAAGCTGGGCTGTGTGACGAACCCCGGTTAGCCCGACCG  
CTGCGCTTATCCGTAATATCGCTTGAGTCCAACCGGTAAAGACAGCTTATCGCCACTGGCAGCAGCCACTG  
GTAAACGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCTTAACACGGCTACCT  
AGAAGGACAGTATTGGTATCTGCGCTGCTGAAGCCAGTTACCTTCGGAAGAGTGGTGTAGCTTGTATCCG  
CAACAAACCCGCTGGTAGCGCGGTTTTTGTGTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGA  
AGATCCTTTGATCTTTTCTTACTGAACGGTATCCCAACCGGAATT

Fig. 2B

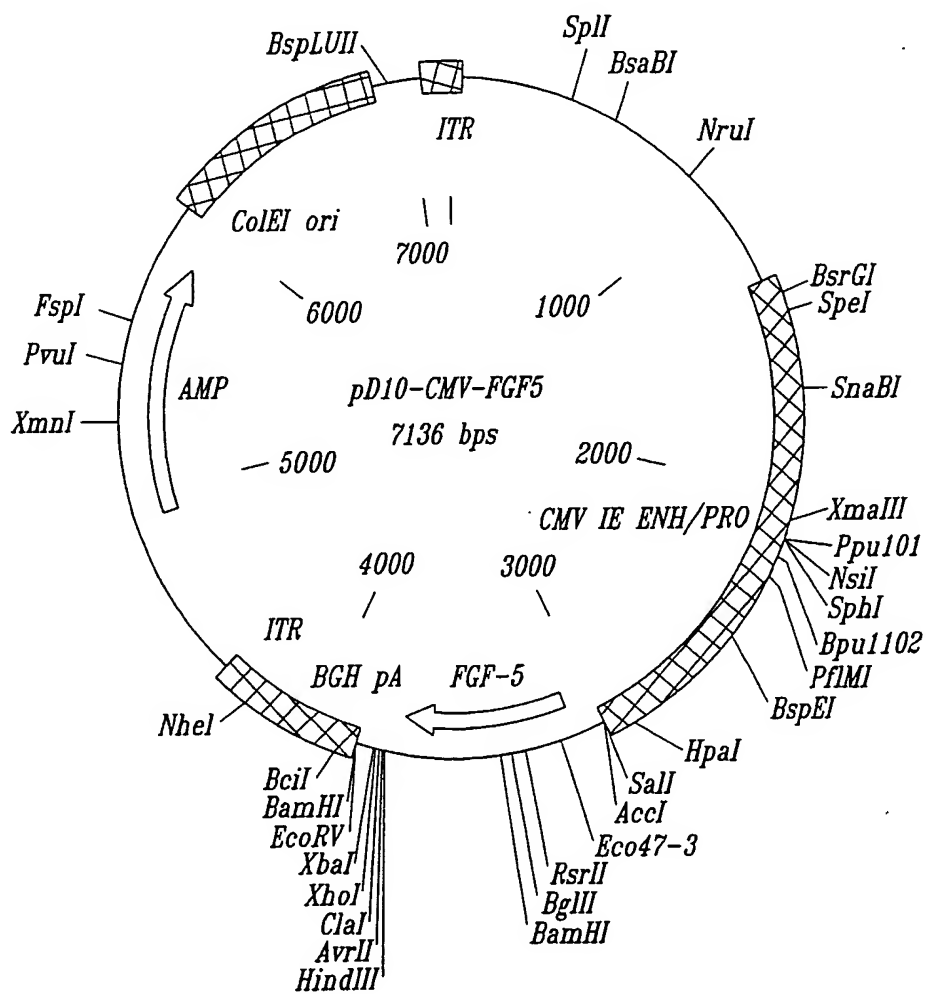
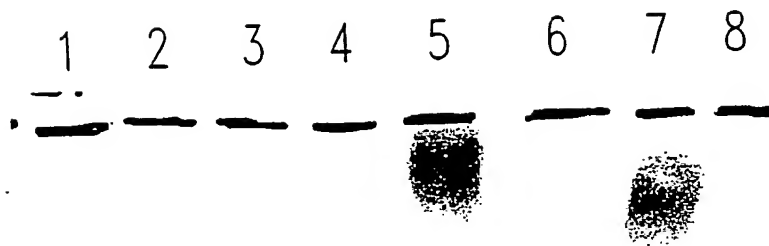


Fig. 3



*Fig. 4*



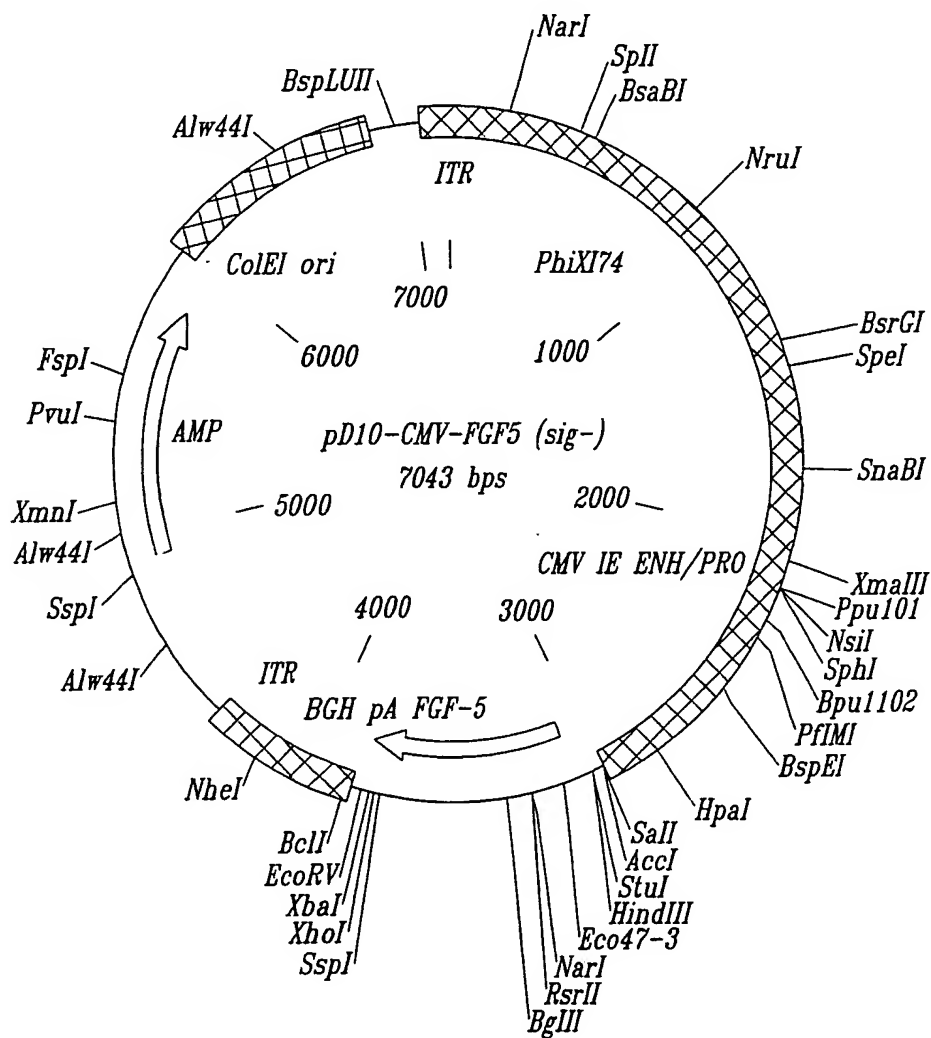
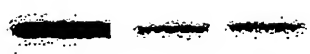
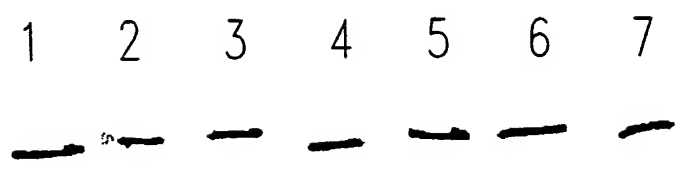


Fig. 5





*Fig. 6*



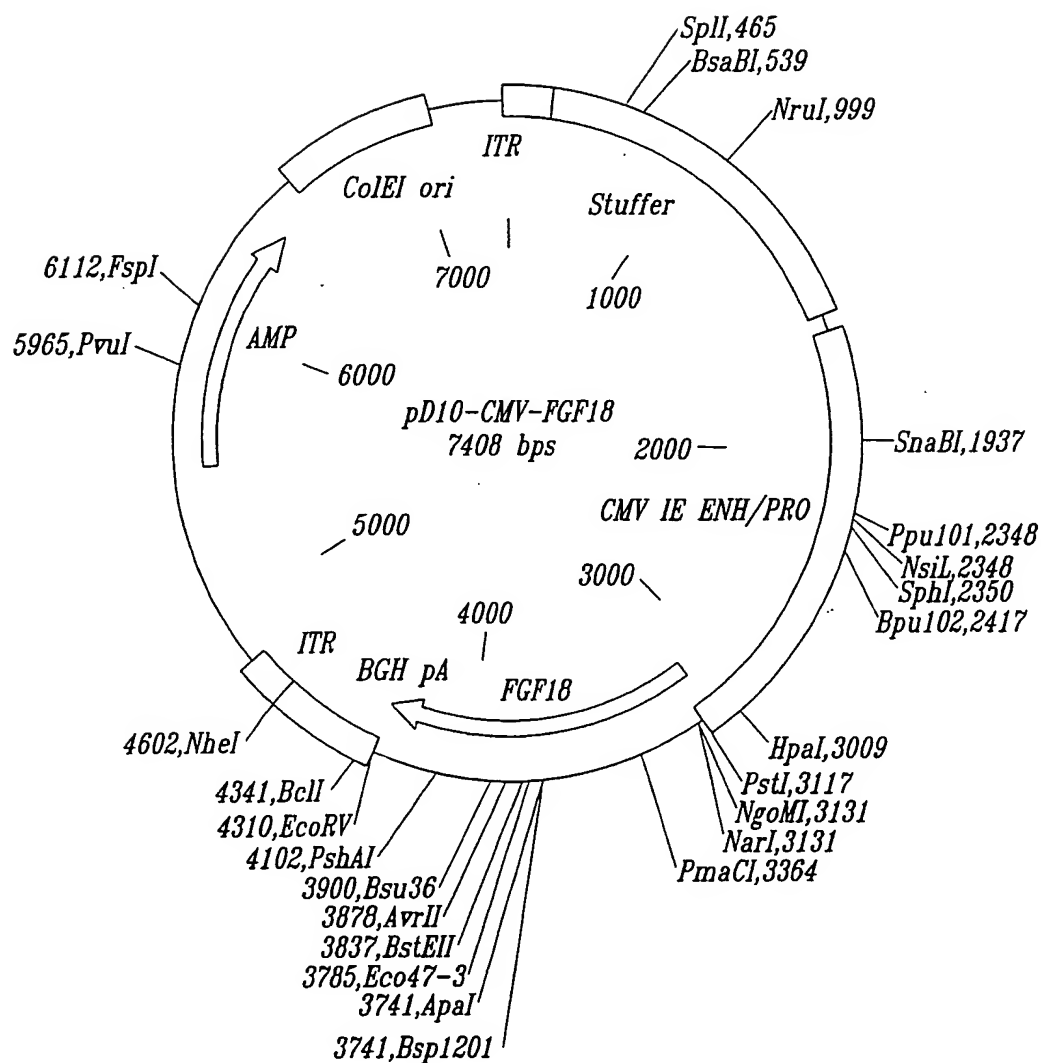
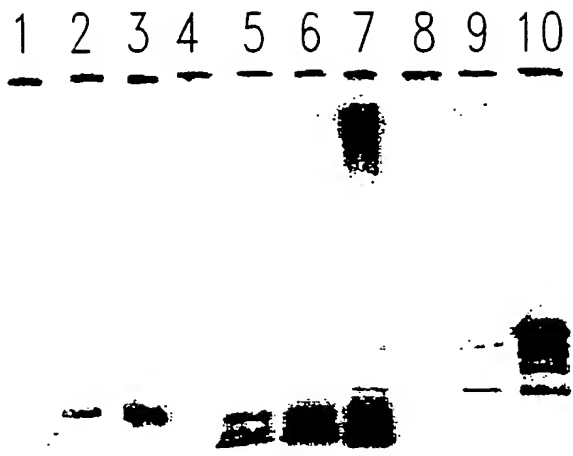
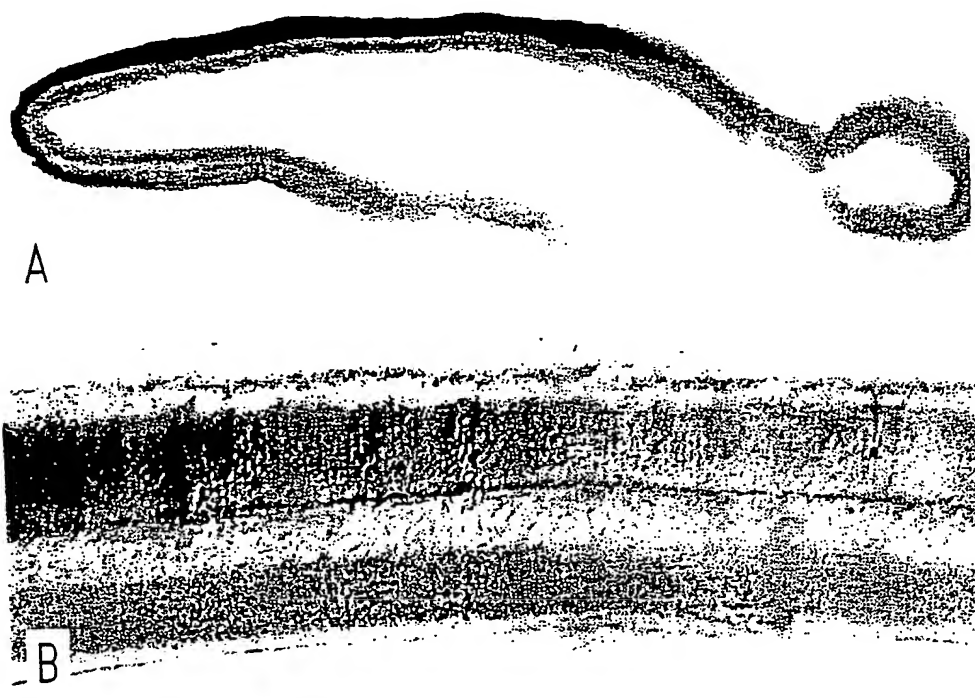


Fig. 7



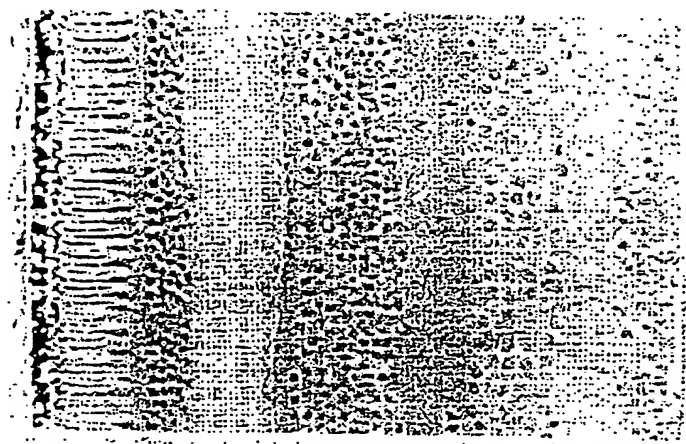


*Fig. 8*



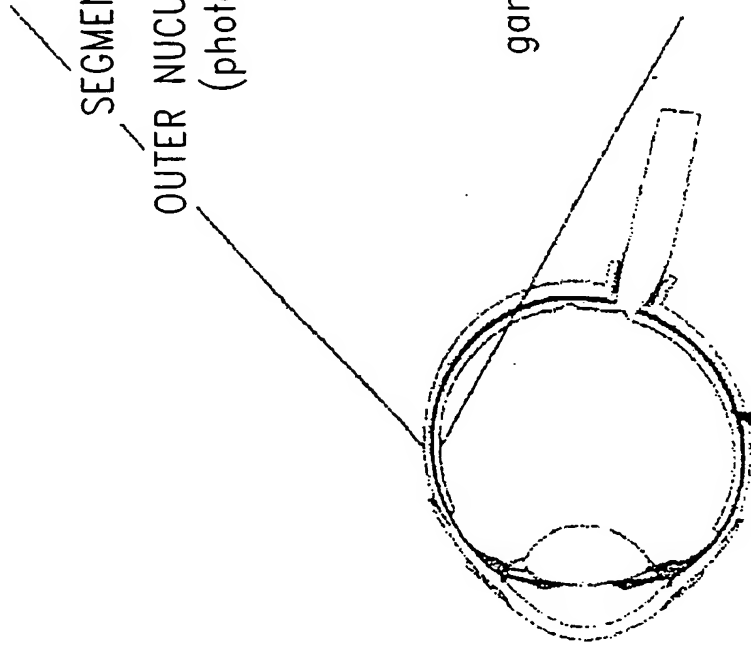
*Fig. 9*





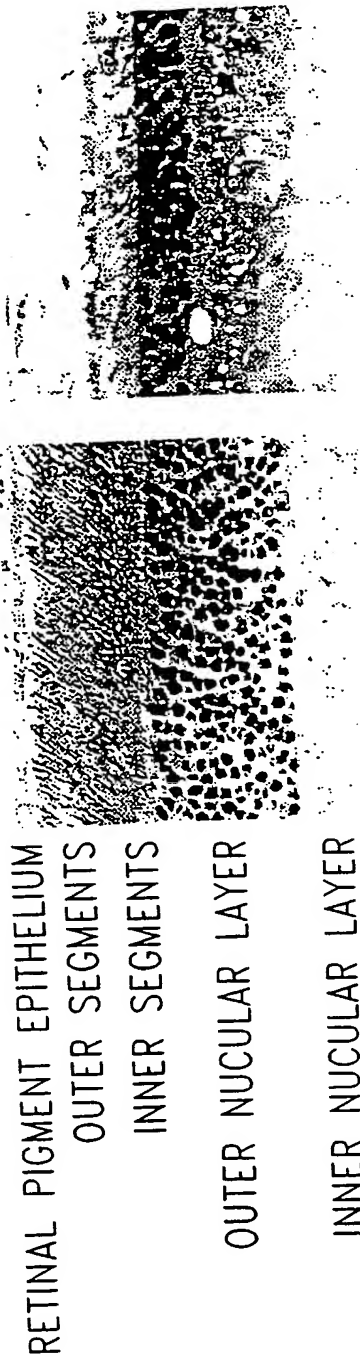
OUTER SEGMENTS  
INNER SEGMENTS  
OUTER NUCLEAR LAYER  
(photoreceptors)

ganglion cells



RETINA

Fig. 10



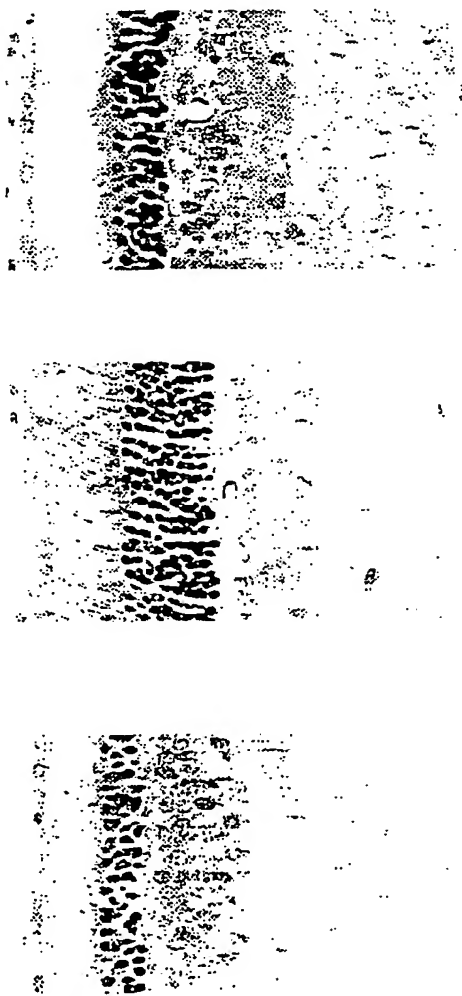
GANGLION CELLS      WILD TYPE      DEGENERATED S334ter

*Fig. 11*

AM 301

DEGENERATED S334ter FGF-2 inj S334ter PBS inj S334ter

RPE  
OUTER SEGMENTS  
INNER SEGMENTS  
OUTER NUCULAR LAYER  
(PHOTORECEPTORS)  
INNER NUCULAR LAYER  
  
GANGLION CELL LAYER



A B C

Fig. 12

RECEIVED

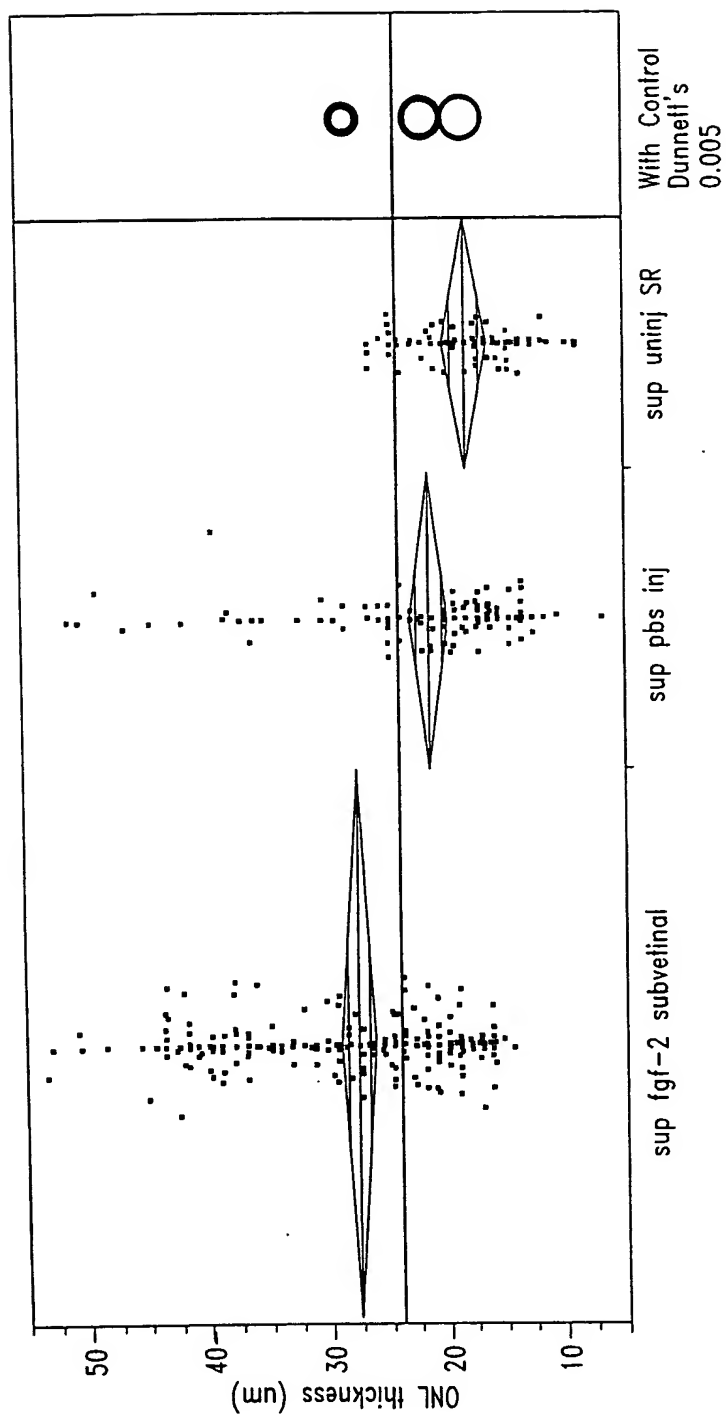


Fig. 13

# OUTER NUCLEAR LAYER THICKNESS AT p60

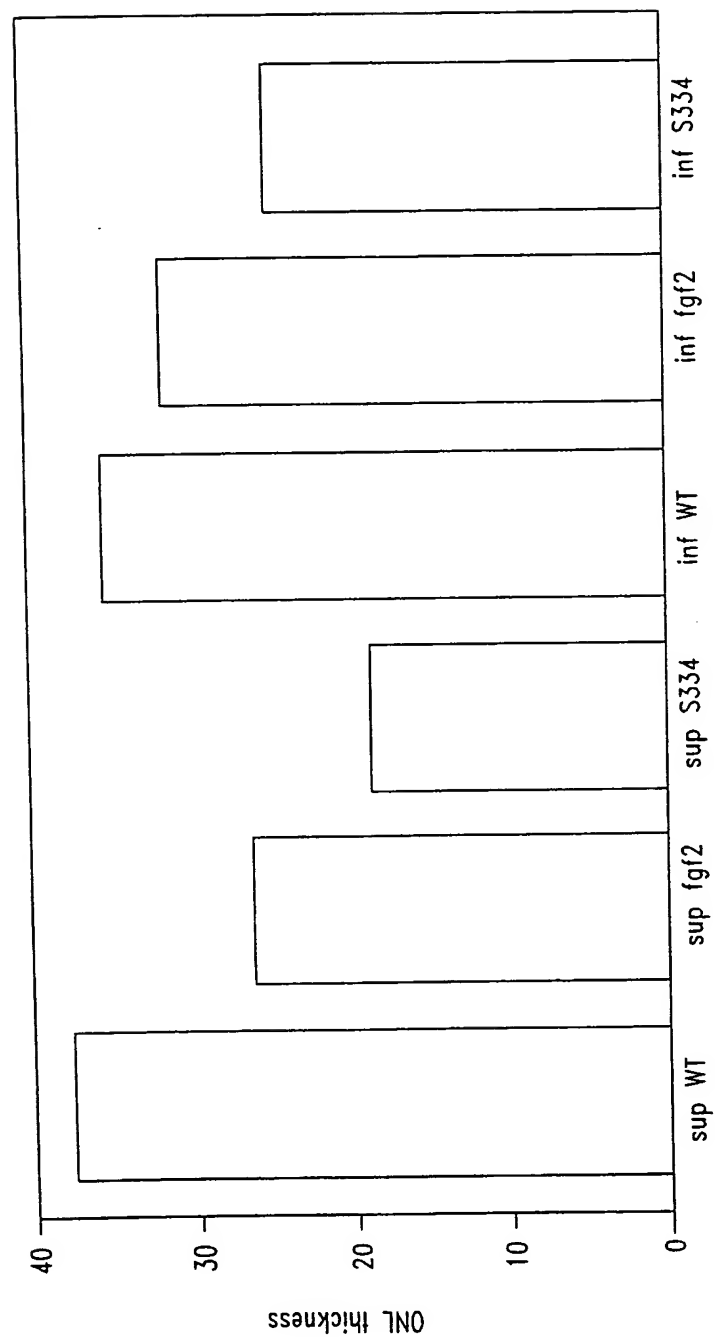
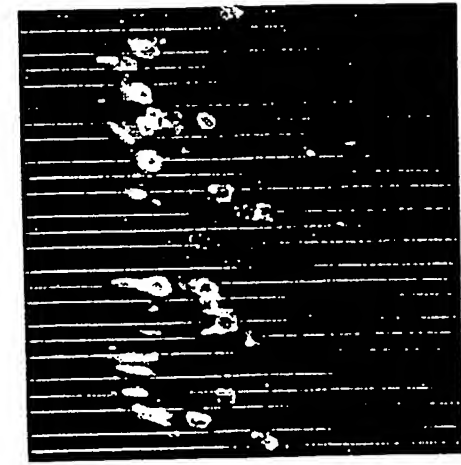
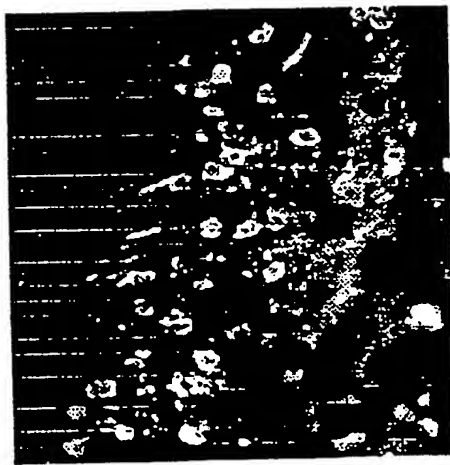


Fig. 14

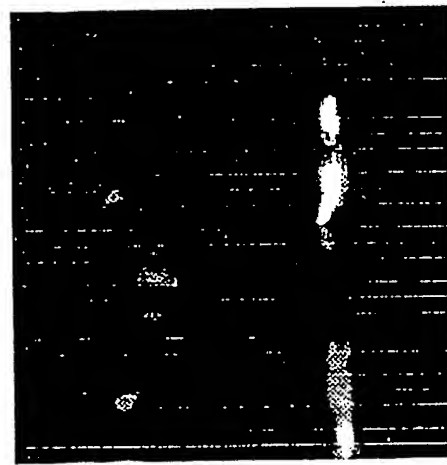


A



B

photoreceptors



C

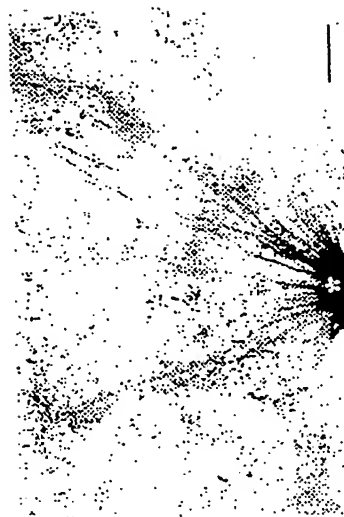
bipolar cells

ganglion cells

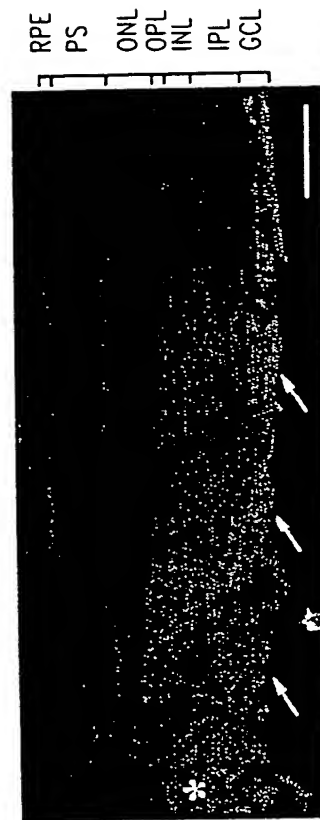
Fig. 15



# AAV-LacZ Transduction of Retinal Ganglia



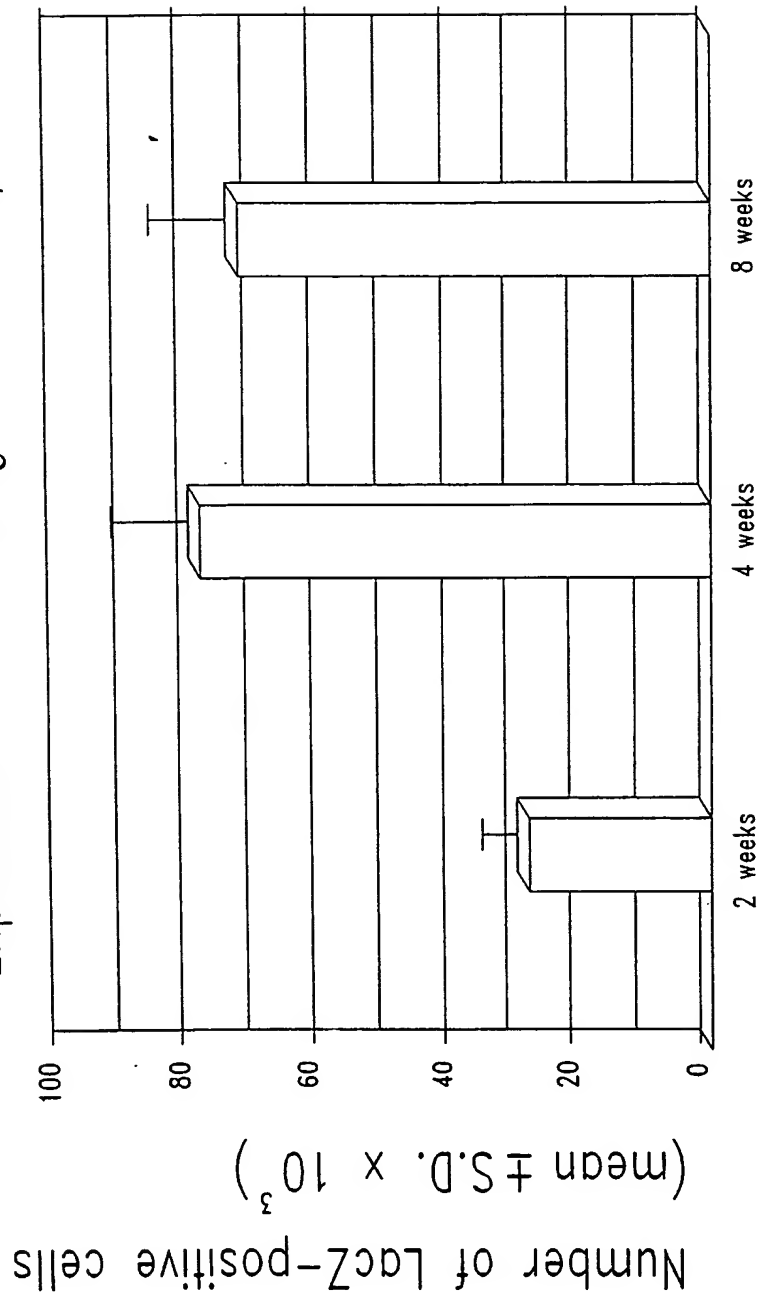
A



B

Fig. 16

# Time Course of AAV-Medicated Transgene Expression in the Ganglion Cell layer



Time after intraocular injection of AAV

Fig. 17



Localization of AAV-Medicated LacZ Gene Product  
in Retrograde Labeled RCG

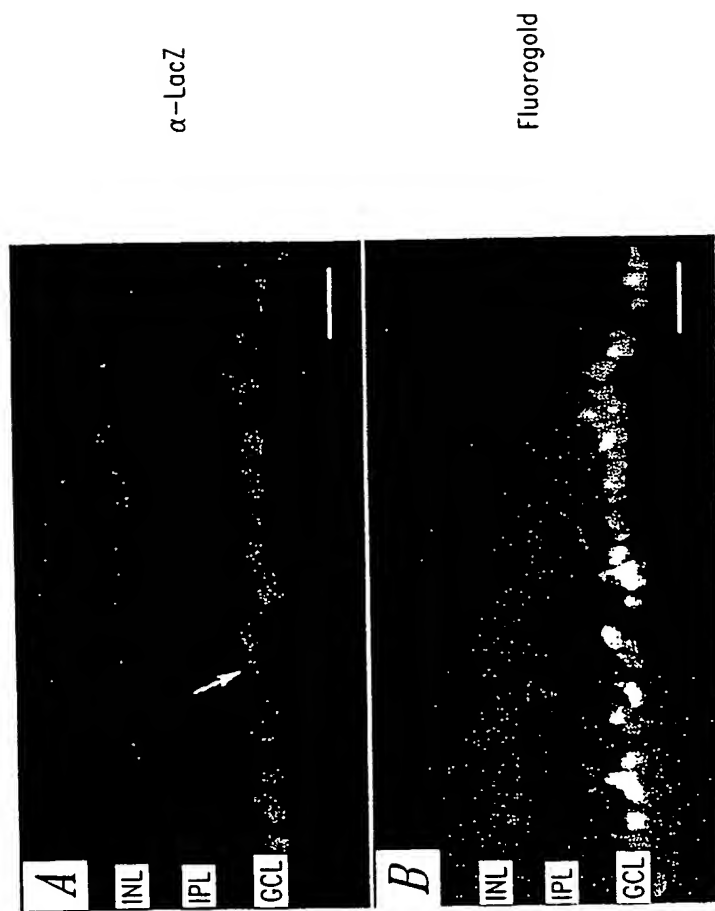


Fig. 18

# Quantification of Flourogold and LacZ Positive Cells in the Ganglion Cell Layer Following Intravitreal Injection of rAAV-LacZ

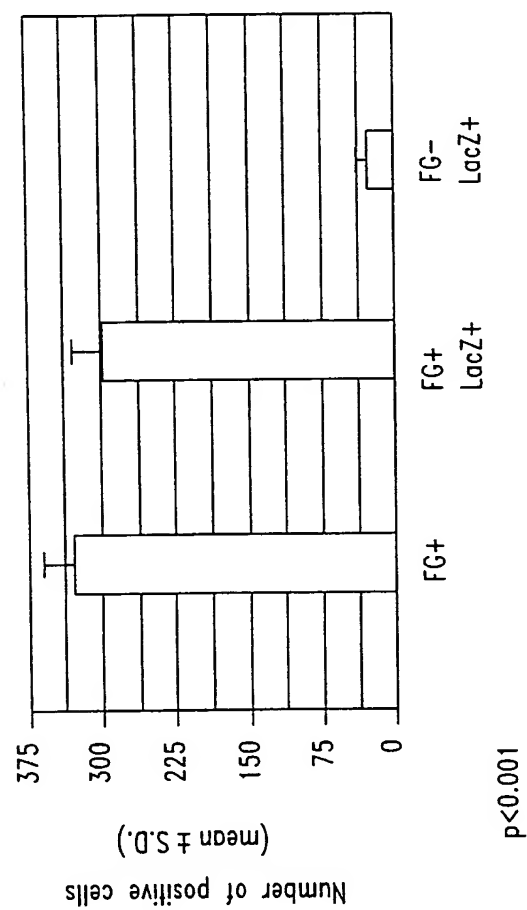


Fig. 19

# Localization of Heparin sulfate Proteoglycan, the Cellular Receptor for AAV, in the Adult Rat Retina

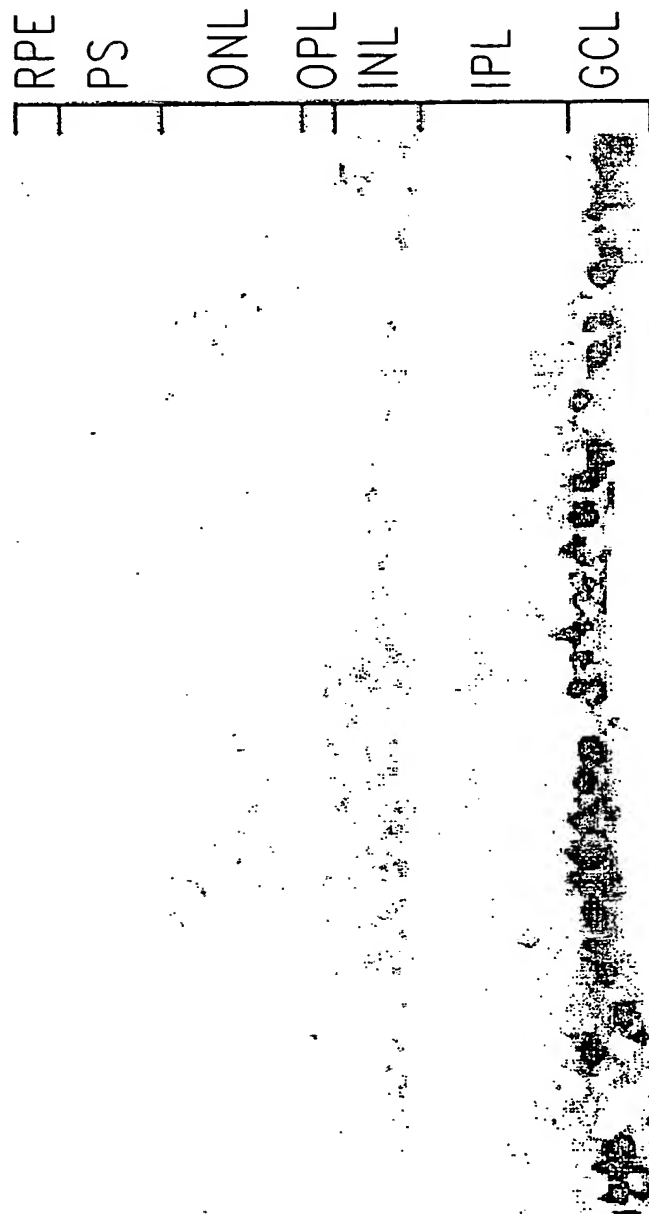


Fig. 20

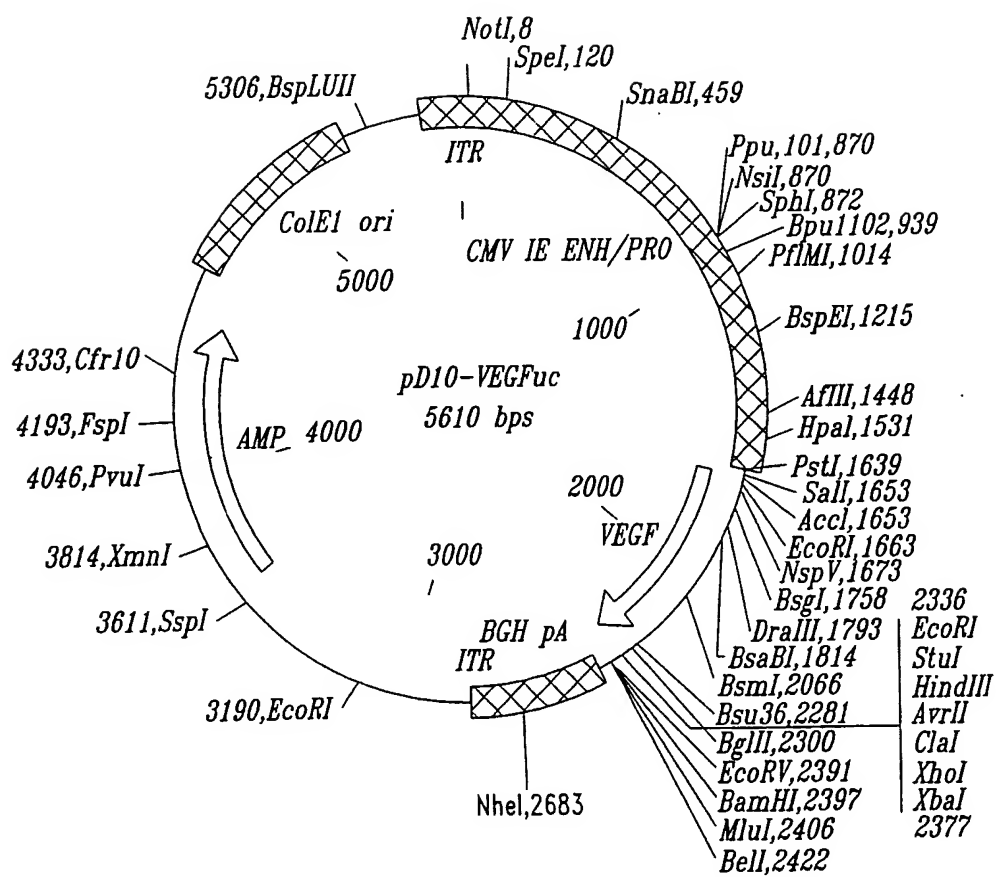


Fig. 21

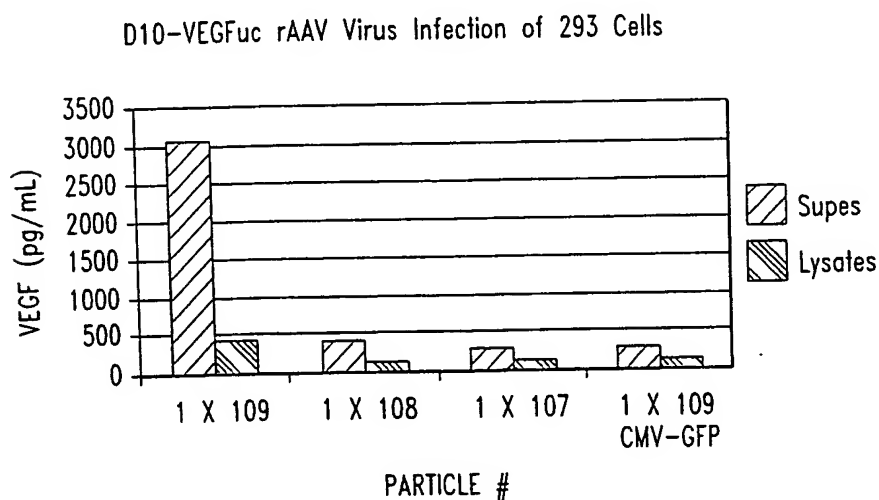
# Nucleotide Sequence of pD10-VEGFuc

AAAACTTGC GGCCGCGAATTCGACTCTAGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTATATTGGCTCATGTCCAATATGACCGCCA  
 TGTGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAACTACGGTAA  
 TGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCAATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTCCATTGACGTCAAT  
 GGGTGGAGTATTTACGGTAACTGCCCACTTGGCAGTACATCAAGTGATCATATGCCAAGTCCGCCCTATTGACGTCAATGACGGTAAATGGCCCGC  
 TGGCATTATGCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTA  
 CACCAATGGCGGTGGATAGCGGTTTGACTCACGGGATTTCAGTCTCCACCCATTGACGTCAATGGGAGTTTGTGTTGGCACC AAAATCAACGGGACT  
 TTCCAAAATGTCGTAATAACCCCGCCCGTTGACGCAATGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTGTGAACCGTCAG  
 ATCGCTTGGAGAGCCATCCACGCTGTTTGGACCTCATAGAACACCGGACCGATCCAGCTCCGCGGCCGGGAACGGTGCATTGGAACGCGGATTCC  
 CCGTGCCAAGAGTGACGTAAGTACCGCTTATAGACTCTATAGGCACACCCCTTGGCTCTTATGCATGCTATAGTGTGTTGGCTTGGGGCTATACACC  
 CCGTCTCTTATGCTATAGTGATGGTATAGCTTAGCCTATAGGTGTGGTTATTGACCATATTGACCACTCCCTATTGGTGACGATACTTCCATTACT  
 AATCCATAACATGGCTCTTGGCCAACTATCTCTATTGGCTATATGCCAATCTGTCTTTCAGAGACTGACACGGACTCTGTATTTTACAGGATGGG  
 GTCCATTATTATTACAAATTCACATATACAACAACCGCGTCCCGGTGCGCCGAGTTTTTATTAACATAGCGTGGGATCTCCGACATCTCGGTACGT  
 GTTCGGGACATGGGCTCTTCTCCGGTAGCGGGGAGCTTCCACATCCGAGCCCTGGTCCCATCCGTCAGCGGCTCATGGTCTCGGTCAGCTCTTGCTC  
 CTAACAGTGGAGGCCAGACTTAGGCACAGCACAATGCCACCACCACAGTGTGCCGCAAGGCGGTGGCGTAGGGTATGTGTGAAAATGAGCTCGG  
 AGATTGGGCTCGACCTGGAGCGAGATGGAAGACTTAAGGCAGCGGAGAGAGATGCAGGCAGCTGAGTTGTTGATTCTGATAAGAGTCAGAGTAAC  
 TCCCGTTGCGGTGCTGTTAACGGTGGAGGGCAGTGTAGTCTGAGCAGTACTCGTTGCTGCCGCGCGCCACCAGACATAATAGCTGACAGACTAACAGAC  
 TGTCTCTTCCATGGGCTTTTCTGCACTCACCGTCGTCGACCTAAGAATTGCGCCTTCGAAACCATGAACCTTCTGCTGCTTGGGTGCTTGGAGCCTT  
 GCCTTGTGCTCTACCTCCACCATGCCAAGTGGTCCAGGCTGACCCATGGCAGAAGGAGGAGGAGCAGAATCATCAGCAAGTGGTGAAGTTCATGGATG  
 CTATCAGCGCAGCTACTGCCATCCAATCGAGACCTGGTGGACATCTTCCAGGAGTACCTGATGAGATCGAGTACATCTTCAAGCCATCTGTGTGCCCC  
 TGATGCGATGCGGGGGCTGCTGCAATGACGAGGGCTGGAGTGTGTGCCACTGAGGAGTCCAAATCACCATGCAGATTATGCGGATCAAACTCACCAA  
 GGCAGCACATAGGAGAGATGAGCTTCTACAGCACAACAAATGTGAATGCAGACCAAGAAAGATAGAGCAAGACAAGAAAATCCCTGTGGGCTTGTCTC  
 AGAGCGAGAGAAAGCATTTGTTGTACAAGATCCGACAGCTGTAATGTTCTGCAAAAACACAGACTCGCGTTGCAAGGCGAGGAGCTTGAGTTAAACG  
 AACGTACTTGACAGTGTGACAAGCCGAGGCGGTGAGCCGGCAGGAGGAAGGAGCTCCCTCAGGGTTTCGGGAACAGATCTCTCACCAGGAAGACTGA  
 TACAGAAAGGGCAATTAGGCTTAAGCTTCTAGGTATCGATCTCGAGCAAGTCTAGAAAGCCATGGATATCGGATCCACTACGCGTTAGAGCTCGCTGA  
 TCAGCCTCGAGTGTGCTTCTAGTTGCCAGCCATCTGTGTTTGGCCCTCCCGGTGCTTCTTGACCTGGAAGGTGCCACTCCCACTGTCTTCTCTA  
 ATAAAAATGAGGAAATGTCATCGCATGCTGAGTAGGTGTCATTCTATTGCGGGGTGGGGTGGGCGAGGACAGCAAGGGGAGGATTGGGAAGACAATA  
 GCAGGGGGGTGGGCGAAGAACTCCAGCATGAGATCCCGCGCTGGAGGATCATCCAGCTAGCAAGTCCCATCAGTGATGGAGTTGGCCACTCCCTCTCTGC  
 GCGCTCGCTCGCTACTGAGGCGGGCGACCAAGGTGCGCCGACGCGGGGCTTGGCCGGGCGGCTCAGTGAGCGAGCGAGCGCGCCAGCGATTCTCT  
 TGTGTTGCTCCAGACTCTCAGGCAATGACCTGATAGCCTTGTAGAGACTCTCAAAAATAGCTACCTCTCCGGCATGAATTTATCAGCTAGAACGGTTGA  
 ATATCATATTGATGGTATTGACTGTCTCCGGCCTTCTCACCGTTTGAATCTTACCTACACATTACTCAGGCATTGCATTTAAAATATATGAGGGTT  
 CTA AAAATTTTATCCTTGGCTTGAATAAAGGCTTCTCCGCAAAAGTATTACAGGGTCATAATGTTTTGGTACAACCGATTAGCTTTATGCTCTGAG  
 GCTTATTGCTTAATTTTGCTAATCTTTGCTTGGCTGTATGATTATTGGATGTTGGAATTCCTGATGCGGTATTTTCTCTTACGCATCTGTGCGGTA  
 TTTACACCGCATATGGTCACTCTCAGTACAATCTGCTCTGATGCGGCATAGTTAAGCCAGCCCGACACCCGCAACCCGCTGACGCGCCCTGACGG  
 GCTTGTCTGCTCCCGCATCCGCTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCATGTGTGAGGTTTTACCGTCATCACGAAACGCGCGAGACG  
 AAAGGGCTCGTGATAGCCTATTTTATAGGTTAATGTGATGATAAATGTTTCTTAGAGCTCAGGTGGCACTTTTTCGGGAAATGTGCGCGGAACCC  
 CTATTTGTTATTTCTAAATACATTCAATATGTATCCGCTCATGAGACAATAACCTGATAAATGCTTCAATAATTGAAAAAGGAAGATGATGAT

Fig. 22A

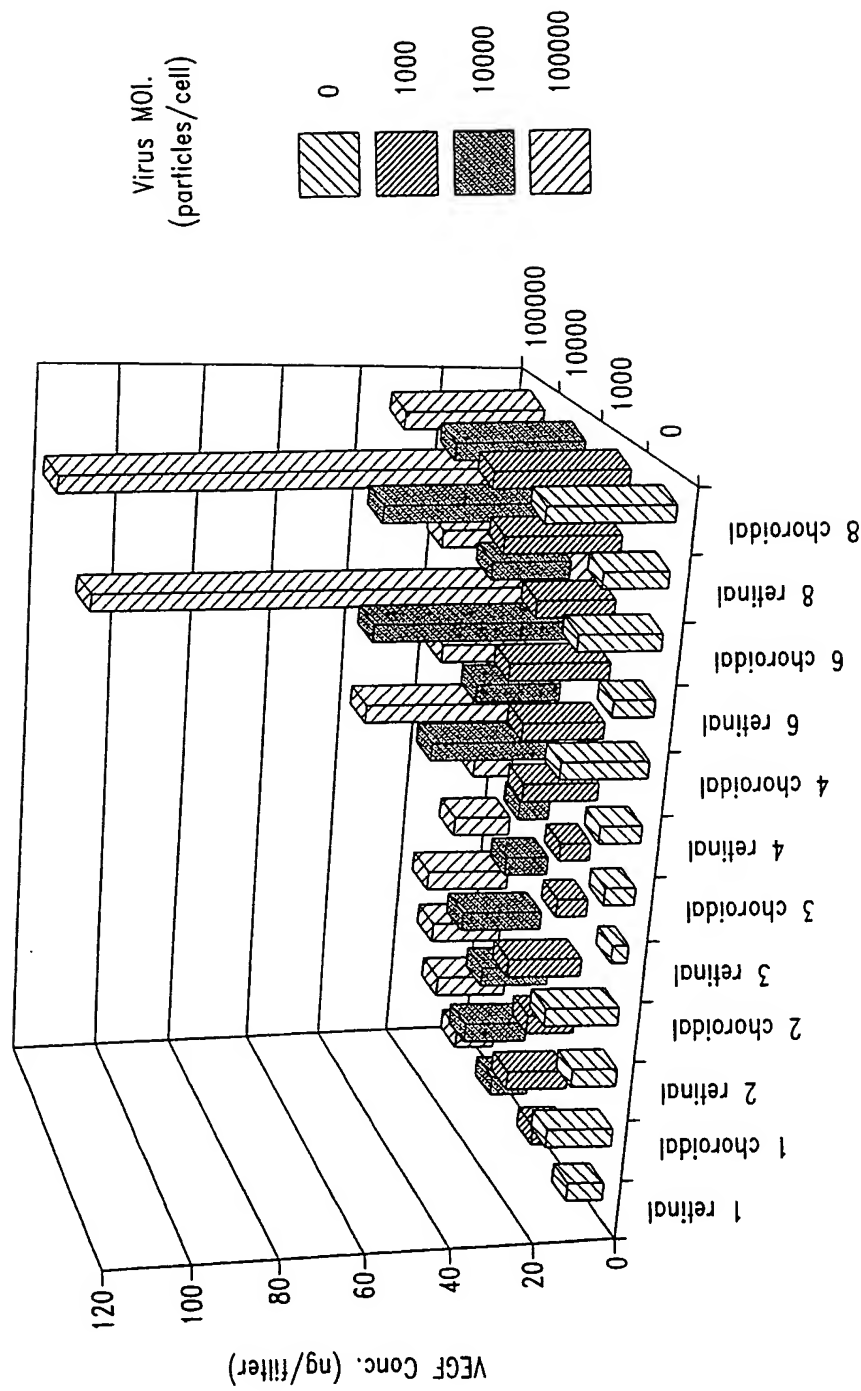
ATTCAACATTTCCGTGTCGCCCTTATCCCTTTTTGCGGCATTTTGCTTCTGTTTTGCTCACCAGAAACGCTGGTGAAAGTAAAGATGCTGAAGA  
 TCAGTTGGGTGCACGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAGATCCTTGAGAGTTTTGCCCCGAAGAACGTTTTCCAATGATGAGCACTT  
 TTAAGTTCTGCTATGTGGCGCGTATTATCCCGTATTGACGCCGGGCAAGAGCAACTCGGTGCGGCATACATATTCTCAGAATGACTTGGTTGAGTAC  
 TCACCAGTCACAGAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCACTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCT  
 GACAACGATCGGAGGACGAAGGAGCTAACCGCTTTTTGCAACATGGGGGATCATGTAACTCGCCTTGATCGTTGGGAACCGAGCTGAATGAAGCCA  
 TACCAACGACGAGCGTGACACCAGATGCCTGTAGCAATGGCAACAGTTGCGCAAACTATTAACGGCACTACTTACTCTAGCTTCCCGCAACAA  
 TTAATAGACTGGATGGAGCGGATAAAGTTGAGGACCACTTCTGCGCTCGGCCCTTCGGCTGGCTGGTTATTGCTGATAAATCTGGAGCCGGTGAGCG  
 TGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGAGTCAGGCAACTATGGATGAACGAA  
 ATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAACCTGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAACTTCATTTT  
 TAATTTAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCGTAAGAAA  
 GATCAAAGGATCTTTTGAGATCCTTTTTTCTGCGCGTAATCTGCTGCTTGCAAAACAAAAAACCCGCTACCAGCGGTGGTTTGTTCGGGATCAAG  
 AGCTACCAACTCTTTTTCGAAGGTAACGGCTTCAGCAGAGCGCAGATACCAATACTGTCTTCTAGTGAGCCGAGTTAGGCCACCACTTCAAGAAC  
 TCTGTAGCACCGCTACATACCTCGCTGCTAATCCTGTTACCACTGGCTGCTGCCAGTGGCGATAAGTCGTGCTTACCAGGTGGACTCAAGACGATA  
 GTTACCGGATAAGGCGCAGCGTGGGCTGAACGGGGGTTCTGTGCACACAGCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTG  
 AGCTATGAGAAAGCGCACGCTTCCGAAGGGAGAAAGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGG  
 GGAACGCGCTGGTATCTTTATAGTCTGTGCGGTTTTCGCCACCTCTGACTTGAGCGTCGATTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAAAA  
 CGCCAGCAACGCGGCTTTTACGGTTCTGGGCTTTTGTGGGCTTTTGTGCATGTTCTTCTGCGTTATCCCTGATTCTGTGGATAACCGTATTA  
 CCGCTTTTGTGAGCTGATACCGCTCGCCGACGCGAACGACGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAGCGCCCAATACGCAAAACCGCT  
 CTCGCCGCGGTTGGCGATTCTTAATGACAGTGGCGCGCTCGCTCGCTCACTGAGGCCGCCGGGCAAGGCCGGGCGTGGGCGACCTTTGTGCGCC  
 GCGCTCAGTGAGCGAGCGAGCGCGCAGAGAGGAGTGGCCAACTCCATCACTGAT

*Fig. 22B*



*Fig. 23*





Time after transfection (Day) and Polarity

Fig. 24

# VEGF Secretion by hRPE After Infection with VEGF AV

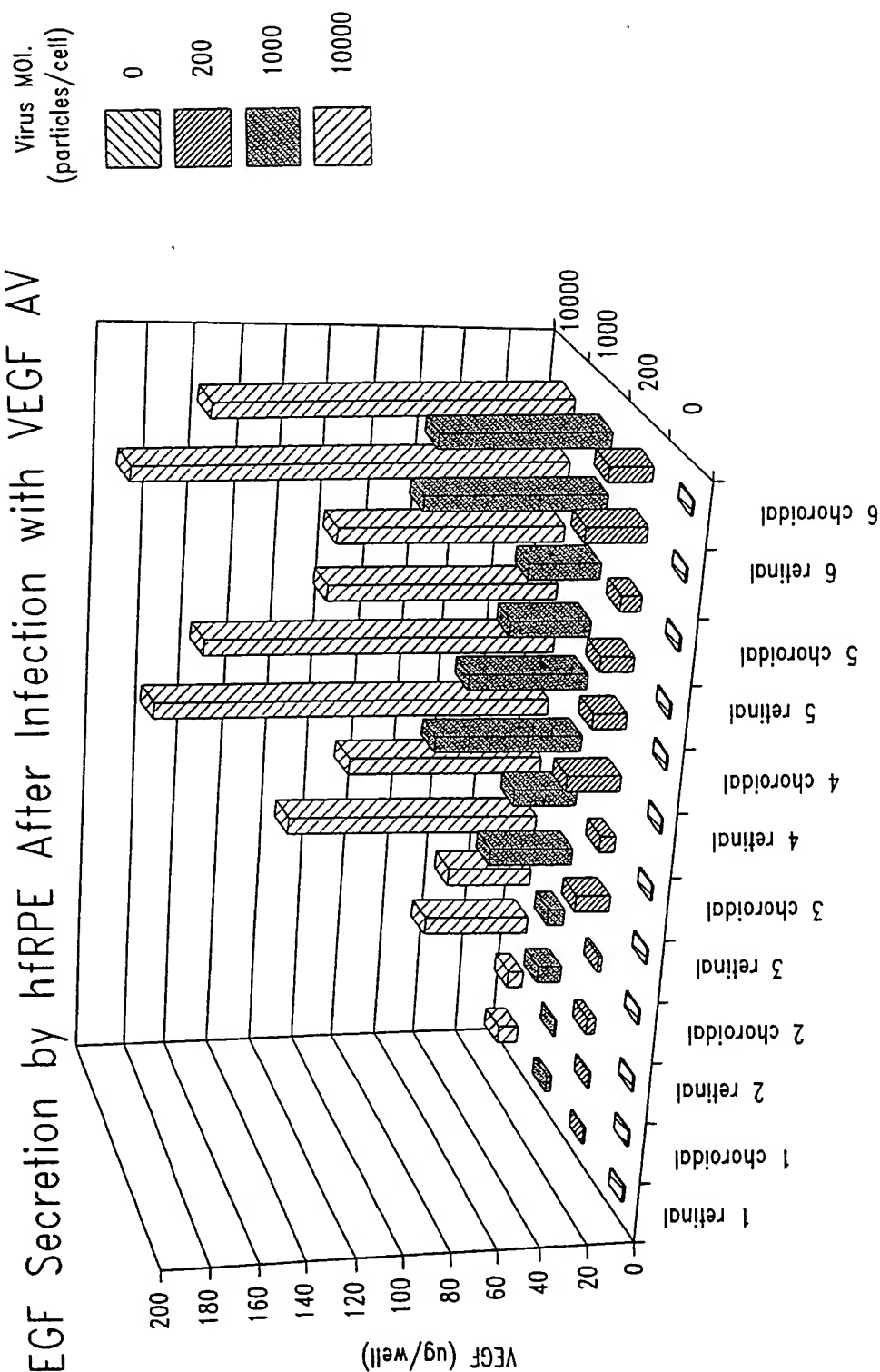


Fig. 25



# Resistance of hfRPE After Infection with VEGF AV

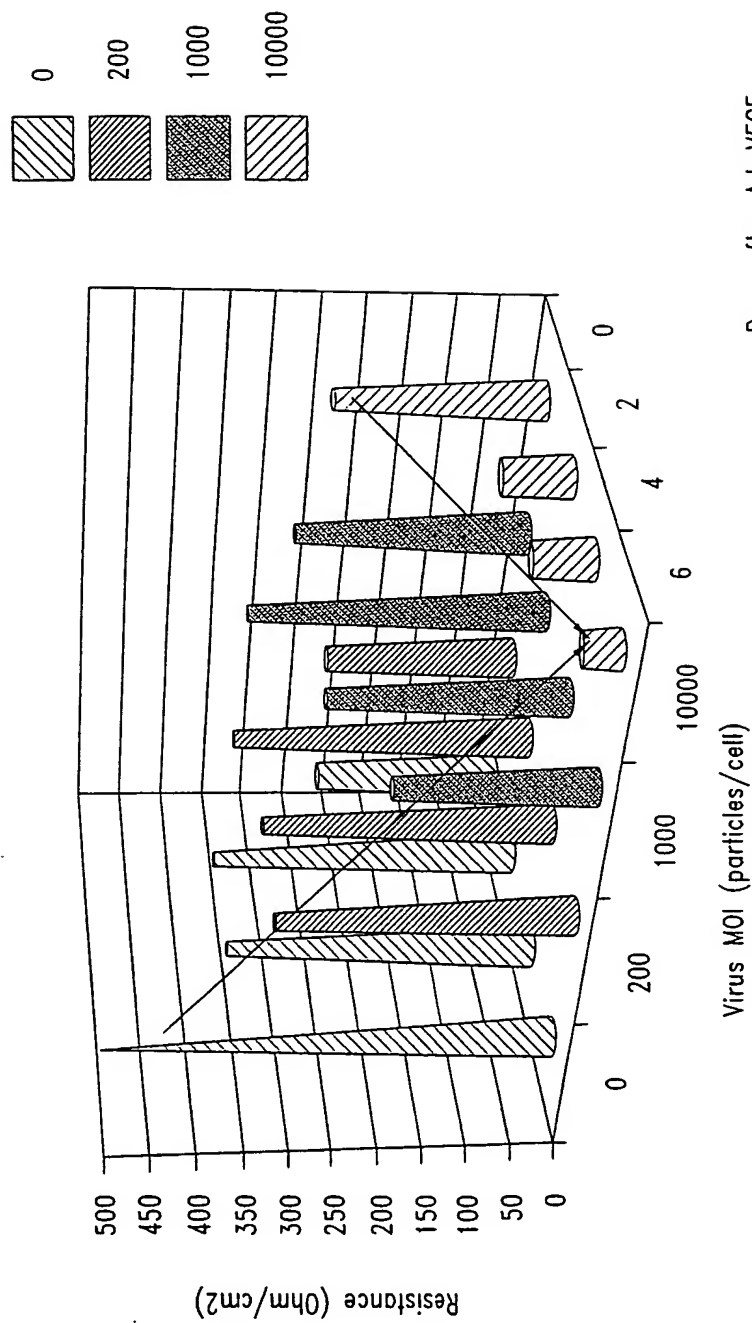


Fig. 26

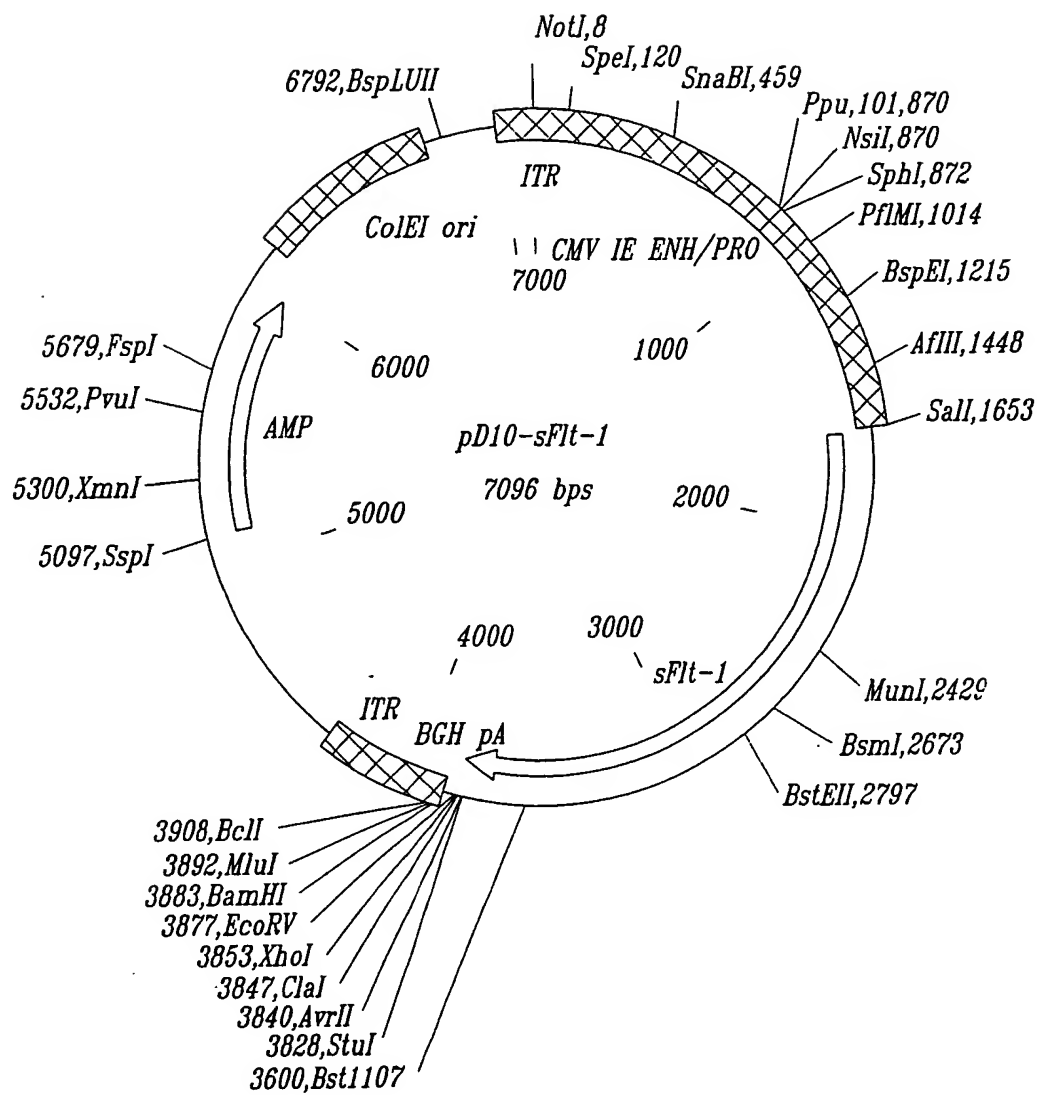


Fig. 27

## Nucleotide Sequence of pD10-SFlt-1

AAAACTTGGCCGCGGAATTCGACTCTAGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCGC  
 CATGTTGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTTCATAGCCCATATATGGAGTTCGCGTTACATAACTTACGG  
 TAAATGGCCCGCTGGCTGACCGCCCAACGACCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCATTGAC  
 GTCAATGGGTGGAGTATTACGGTAAACTGCCCACTTGGCAGTACATCAAGTGATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAAT  
 GGCCCGCTGGCATTATGCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGT  
 TTTGGCAGTACACCAATGGCGTGGATAGCGGTTTGACTCACGGGATTTCCAGTCTCCACCCATTGACGTCAATGGGAGTTTGTGTTTGGCACCAAA  
 ATCAACGGGACTTTCCAAATGTCTAATAACCCCGCCCGTTGACGCAATGGGCGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTT  
 TAGTGAAACGTCAGATCGCTGGAGACCCATCCACGCTGTTTTGACCTCCATAGAAGACCCGGGACCGATCCAGCTCCGCGGCGGGAACGGTGCA  
 TTGGAACGCGGATCCCCGTGCCAAGAGTGACGTAAGTACCGCTATAGACTCTATAGGCACACCCCTTGGCTCTTATGCTGCTATACTGTTTTGG  
 CTGGGGCTATACACCCCGCTCCTTATGCTATAGGTGATGGTATAGCTTAGCTTATAGGTGTGGGTATTGACCATTTGACCACTCCCTATTGG  
 TGACGATACTTTCCATTACTAATCCATAACATGGCTCTTTGCCACAATATCTCTATTGGCTATATGCCAATCTCTGTCTTCAGAGACTGACACGGA  
 CTCTGTATTTTACAGGATGGGTCATTTATTATTACAAATTCACATATACAACACGCGCTCCCCGTGCCCGCAGTTTTTATTAACATAGCGTG  
 GGATCTCCGACATCTCGGTCAGTGTTCGGGACATGGGCTCTTCTCGGTAGCGGCGGAGCTTCCACATCCGAGCCCTGGTCCATCCGTCCAGCGCT  
 CATGGTCGCTCGGACGCTCCTTGCTCTAACAGTGGAGGCCAGACTTAGGCACAGCACAATGCCACCACCAGTGTGCCGCAAGGCCGCTGGCGG  
 TAGGGTATGTGCTGAAAATGAGCTCGGAGATTGGGCTCGCACCTGGACGCAGATGGAAGACTTAAGGCAGCGGCAGAAGAAGATGCAGGCAGCTGAGT  
 TGTGTATTCTGATAAGAGTCAGAGGTAACCTCCGTTGCGGTGCTGTTAACGGTGGAGGCGAGTGTAGTCTGAGCAGTACTCGTTGCTGCGCGCGCGC  
 CACCAGACATAATAGCTGACAGACTAACAGACTGTTCTTTCCATGGGTCTTTTCTGCAGTACCCTGCTGCAGCTAAGAATTCCGCTTTTACCATGG  
 TCAGTACTGGGACACCGGGCTCTGCTGTGCGGCTGCTCAGCTGTCTGCTTCTCAGGATCTAGTTTCAAGTTCAAAATTAAGATCCTGAAGTGA  
 GTTAAAAGGCACCCAGCACATCATGCAAGCAGGCCAGACACTGCATCTCCAATGCAGGGGGGAGCAGCCATAAATGGTCTTTGCCTGAAATGGTGA  
 GTAAGGAAAGCGAAAGGCTGAGCATACTAAATCTGCTGTGGAAGAAATGGCAACAATCTGCAGTACTTAACTTGAACACAGCTCAAGCAAAAC  
 ACACTGGCTTCTACAGCTGCAATATCTAGCTGTACCTACTTCAAAGAAGAGGAAACAGAATCTGCAATCTATATTTATTAGTGATACAGGTAGAC  
 CTTTCGTAGAGATGTACAGTGAATCCCCGAAATATACACATGACTGAAGGAAGGAGCTCGTATTCTTCCGCGGTTACGTACCTAACATCACTG  
 TTACTTTAAAAAGTTTCCACTTGACACTTTGATCCCTGATGGAAAACGCATAATCTGGGACAGTAGAAAGGGCTTCATCATATCAAATGCAACGTACA  
 AAGAAATAGGGCTTCTGACCTGTGAAGCAACAGTCAATGGGCATTTGTATAAGACAACATCTCACACATCGACAACCAATACAATCATAGATGTCC  
 AAATAAGCACACCACCGCCAGTCAAAATTACTAGAGCCATACTCTTGCTCAATTGTACTGTACCACTCCCTTGAACACGAGAGTTCAAATGACCT  
 GGAGTTACCTGATGAAAAAATAAGAGAGCTTCCGTAAGGCGACGAATGACCAAGCAATCCCATGCCAACATATTCTACAGTGTCTTACTATTG  
 ACAAATGCAAGAACAAAGACAAGGACTTTATACCTGTGCTGAAGGAGTGGACCATCTTCAATCTGTTAACACCTCAGTGCAATATATGATAAG  
 CATTCACTCACTGTGAACATCGAAAAAGCAGGTGCTTGAACCGTAGCTGGCAAGCGGCTTACCGGCTCTATGAAAGTGAAGGCATTTCCCTCGC  
 CGGAAGTGTATGGTTAAAAGATGGGTACCTGCGACTGAGAATCTGCTCGCTATTTGACTCGTGGCTACTCGTTAATTATCAAGGACGTAACGAAG  
 AGGATGCAGGGAATTATACAATCTGCTGAGCATAAAACAGTCAATGTGTTTAAAAACCTCACTGCCACTCTAATTGTCAATGTGAACCCAGATT  
 ACGAAAAGGCGGTGTCATCGTTCCAGACCCGGCTCTTACCCACTGGGACGACAGCAATCTGACTGTGACCGCATATGGTATCCCTCAACCTACAA  
 TCAAGTGGTTCTGGCACCCCTGTAAACATAATCATTCCGAAGCAAGGTGTGACTTTTGTCCAATAATGAAGAGTCTTTATCTTGGATGCTGACAGCA  
 ACATGGGAAACAGAATTGAGAGCATCACTCAGCGCATGGCAATAATAGAAGGAAAGAAATAGATGGCTAGCACCTTGGTTGGCTGACTCTAGAATTT  
 CTGGAATCTACATTTGCATAGCTTCCAATAAGTTGGGACTGTGGGAAGAAACATAAGCTTTATATCACAGATGTCCAAATGGGTTTCATGTTAACT  
 TGGAAAAATGCCGACGGAAGGAGAGGACCTGAACTGTCTGCACAGTTAAACAAGTCTTATACAGAGAGCTTACTGGATTTTACTGCGGACAGTTA  
 ATAACAGAACATGCACTACAGTATTAGCAAGCAAAAAATGGCCATCACTAAGGAGCACTCCATCACTTAACTTACCATCATGAATGTTTCCCTGC  
 AAGATTCAAGCACCTATGCTGACAGCCAGGAATGTATACAGGGGAAGAAATCTCCAGAAGAAAGAAATTACAATCAGAGGTGAGCACTGCAACA  
 AAAAGGCTGTTTTCTCGGATCTCCAAATTTAAAGCACAAGGAATGATTGTACACACAAGTAATGTAAAAATTAAAGGACTCATTAAAAAGTAA  
 CAGTTGTCTCATATCATCTTGATTATTGTCACTGTGCTAACTTTCAAGCTCAAGGCGAATTCAAGCTTCCATAGGTATCGATCTCGAGCA  
 GTCTAGAAAGCATGGATATCGGATCCACTACGCTTAGAGCTCGCTGATCAGCTCGACTGTGCTTCTAGTTGCCAGCCATCTGTTGTTGCCCTC

Fig. 28A

CCCCCTGCCCTTCCTGACCCTGGAAGGTGCCACTCCACTGTCCCTTCTAATAAAATGAGGAAATTCATCGCATTGCTGAGTAGGTGTCATTCTAT  
 TCTGGGGGTGGGGTGGGCAGGACAGCAAGGGGAGGATTGGGAAGACAATAGCAGGGGGTGGGCGAAGAACTCCAGCATGAGATCCCCGGCTGGA  
 GGATCATCCAGCTAGCAAGTCCCATCAGTGATGGAGTTGGCCACTCCCTCTCTGCGCGCTCGCTCGCTCACTGAGGCCGGCGACCAAGGTGCCCCGA  
 CCCCCGGGCTTTGCCGGGGCGCTCAGTGAGCGAGCGAGCGCCAGCGATTCTCTGTTTGTCTCAGACTCTCAGGCAATGACCTGATAGCCTTTGT  
 AGAGACCTCTCAAAATAGCTACCTCTCCGGCATGAATTTATCAGCTAGAACGGTTGAATATCATATTGATGGTGATTTGACTGTCTCCGGCCTTCT  
 CACCCGTTTGATCTTTACCTACACATTACTCAGGCATTGCATTAAAAATATAGAGGGTTCTAAAAATTTTATCCTTGGCTTGAATAAAGGCTTCT  
 CCGCAAAAGTATTACAGGGTCATAATGTTTTGGTACAACCGATTAGCTTTATGCTCTGAGGCTTTATTGCTAATTTTGCTAATTTTGCTTGC  
 CTGTATGATTTATTGGATGTTGAATTCCTGATGCGGATTTTCTCCTACGCATCTGTGCGGATTTTACACCGCATATGGTGCACTCTCAGTACAAT  
 CTGCTCTGATGCCGATAGTTAAGCCAGCCCCGACACCCGCCAACCCGCTGACGCGCCTGACGGGCTTGTCTGCTCCCGCATCCGCTTACAGACA  
 AGCTGTGACCGTCTCCGGAGCTGCATGTGTGAGGTTTTACCCTCATCACCAGAACGCGGAGACGAAAGGGCTCGTGATACGCTATTTTATA  
 GGTAAATGTCATGATAATAATGGTTTCTAGAGCTCAGGTGGCACTTTTGGGGAATGTGCGCGGAACCCCTATTGTTATTTTCTAATAACATTC  
 AAATATGTATCCGCTCATGAGACAATAACCTGATAAATGCTTCAATAATATTGAAAAGGAAGATATGAGTATCAACATTTCCGTGTCGCCCTTAT  
 TCCCTTTTTTGGGCAATTTTGCCTTCTGTTTTGCTACCCAGAAACGCTGGTGAAGTAAAGATGCTGAAGATCAGTTGGGTGCAGAGTGGGTTA  
 CATCGAACTGGATCTCAACAGCGGTAAAGATCCTTGAGAGTTTTGCCCCGAAGACGTTTTCCAATGATGAGCACTTTTAAAGTCTGCTATGTGGCGC  
 GGTATTATCCGCTATTGACGCCGGGCAAGAGCAACTCGGTGCGCCGATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCACAGAAAGCA  
 TCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAATTAATCTGACAACGATCGGAGGACC  
 GAAGGAGCTAACCGTTTTTGCACAACATGGGGATCATGTAACCTCGCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAACGACGAGCG  
 TGACACCACGATGCCGTAGCAATGGCAACACGTTGCGCAAACTATTAACCTGCGCAACTACTTACTTAGCTTCCCGGCAACAATTAATAGACTGGAT  
 GGAGGCGGATAAAGTTGACGAGCACTTCTCGCTCGGCCCTTCCGGCTGGCTGGTTATTGCTGATAAATCTGGAGCCGCTGAGCGTGGGTCTCGCG  
 TATCATTGACGACTGGGGCCAGATGTAAGCCCTCCGCTATCGTAGTTATCTACACGACGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGAT  
 CGCTGAGATAGGTGCTCACTGATTAAGCATTGGTAACCTGTGAGACCAAGTTTACTCATATATACCTTAGATTGATTTAAACCTCATTTTAAATTA  
 AAGGATCTAGGTGAAGATCTTTTGTATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCGCTAGAAAAAGATCAA  
 AGGATCTTCTGAGATCTTTTTTCTGCGCGTAATCTGCTGCTTGCAAAACAAAAAACCCGCTACCGAGCGGTGGTTTGTGCGGATCAAGAGCT  
 ACCAACTCTTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCGCAGATACCAAACTACTGCTTCTAGTGAGCGTAGTTAGGCCACCATTCAAGAACTC  
 TGTAGCACCCTACATACCTCGCTCTGCTAATCTGTTACAGTGGCTGCTGCCAGTGCGATAAGTCGTGCTTACCGGTTGGACTCAAGACGATA  
 GTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGTTCTGTCACAGCCAGCTTGGAGCGAACGACCTACACCGAATGAGATACCTACAGCG  
 TGAGCTATGAGAAAGCGCCACGCTTCCGAAGGGAGAAAGCGGACAGGTATCCGGTAAGCGGACGGGTCGGAACAGGAGAGCGACGAGGGAGCTTCC  
 AGGGGAAACGCTGGTATCTTTATAGTCTGTCGGGTTTCCGACCTCTGACTTGAGCGTCGATTTTGTGATGCTCGTCAGGGGGCGGAGCCTATG  
 GAAAAACGCCAGCAACGCGGCTTTTACGGTTCTTGGCTTTTGTGCGCTTTTGTGCTCACATGTTCTTCTGCGTTATCCCTGATTCTGTGGATAA  
 CCGTATTACCGCTTTGAGTGAGCTGATACCGCTCGCCGACGCGAACGACCGAGCGAGTCAGTGAGCGAGGAAGCGGAAGAGCGCCCAATACG  
 CAAACCGCTCTCCCCGCGGTTGGCGGATTCATTAATGCACTGCGCGCTCGCTCGCTCACTGAGGCCGCCGGGCAAGCCGGGCTCGGGCGAC  
 CTTTGGTCCCGGCTCAGTGAGCGAGCGCGCAGAGAGGAGTGGCCAACTCCATCACTGAT

Fig. 28B

HumanFGF-20

atggctcccttagccgaagtcggggcctttctgggcgcctggaggccttggccagcag  
M A P L A E V G G F L G G L E G L G Q Q

gtgggttcgcatttcctgttcctcctgccgggagcggccgcctgctgggcgagcgc  
V G S H F L L P P A G E R P P L L G E R

aggagcgcggcggagcggagcgcgcggcggcggggcctgcgcagctggcgcacctg  
R S A A E R S A R G G P G A A Q L A H L

cacggcatcctgcgccggcagctctattgccgcaccggcttccacctgcagatcctg  
H G I L R R R Q L Y C R T G F H L Q I L

cccgcgcgcagcgtgcaggcaccggcaggaccacagcctcttcggtatcttgaattc  
P D G S V Q G T R Q D H S L F G I L E F

atcagtgtggcagtgaggcgtcagtaggtgtggacagtggtctctatcttga  
I S V A V G L V S I R G V D S G L Y L G

atgaatgacaaaggagaactctatggatcagagaaacttacttccgaatgcattttagg  
M N D K G E L Y G S E K L T S E C I F R

gagcagtttgaagagaactggtataacacctattcatctaacatatataaacatggagac  
E Q F E E N W Y N T Y S S N I Y K H G D

actggccgcaggtattttgtggcacttaacaagacggaactccaagagatggcgcagg  
T G R R Y F V A L N K D G T P R D G A R

tccaagaggcatcagaaatttacatttcttacctagaccagtgatccagaaagagtt  
S K R H Q K F T H F L P R P V D P E R V

ccagaattgtacaaggacctactgatgtacactga  
P E L Y K D L L M Y T

*Fig. 29*



Mouse FGF-21 cDNA in pGEM-T

gagcgcagccctgatggaatggatgagatctagagttgggacccctgggactgtgggtccg SEQ ID NO: 1  
M E W M R S R V G T L G L W V R SEQ ID NO: 2

actgtgtgtggtgtcttctgctgggggtctaccaagcatacccatccctgactccag  
L L L A V F L L G V Y Q A Y P I P D S S

ccccctctccagtttgggggtcaagtccggcagaggtacctctacacagatgacgacca  
P L L Q F G G Q V R Q R Y L Y T D D D Q

agacactgaagccacctggagatcagggaggtggaacagtgttaggcgagcacaccg  
D T E A H L E I R E D G T V V G A A H R

cagtcagaaagtctcctggagctcaaagccttgaagccaggggtattcaaatcctggg  
S P E S L L E L K A L K P G V I Q I L G

tgcaaacctctaggtttctttgccaacagccagatggagctctctatggatgcctca  
V K A S R F L C Q Q P D G A L Y G S P H

ctttgatcctgaggcctgcagcttcagagaactgctgtgaggacggttacaatgtgta  
F D P E A C S F R E L L L E D G Y N V Y

ccagcttgaagcccatggcctgccctgcgtctgcctcagaaggactccccaaccagga  
Q S E A H G L P L R L P Q K D S P N Q D

tgcaacatcctggggacctgtgcgttcttgcctatgccaggcctgtccacgagcccca  
A T S W G P V R F L P M P G L L H E P Q

agaccaagcaggattcctgccccagagccccagatgtgggtcctctgacccctgag  
D Q A G F L P P E P P D V G S S D P L S

catggtagagcctttacagggccgaagccccagctatgcgtcctgactcttctgaatc  
M V E P L Q G R S P S Y A S

*Fig. 30*



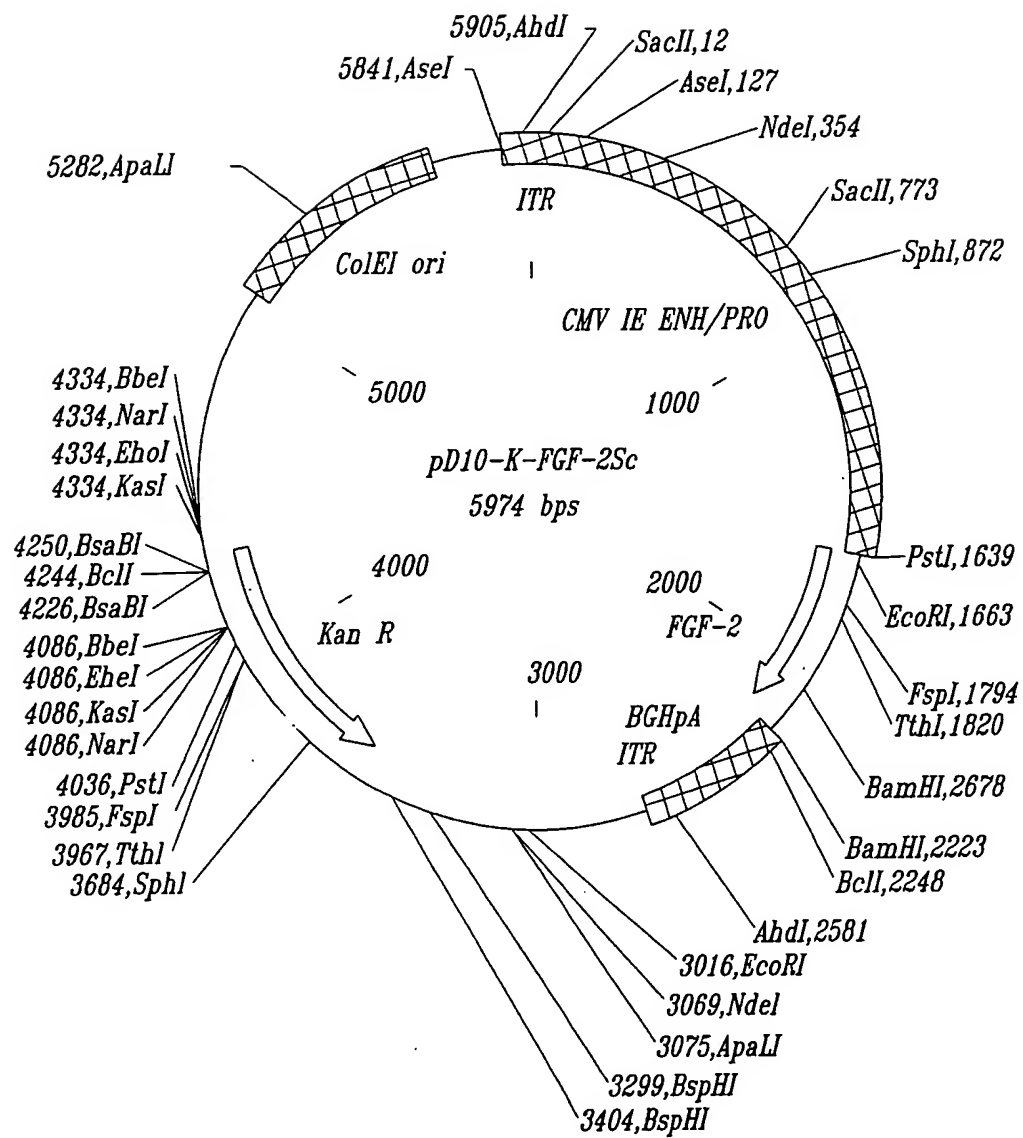


Fig. 31

AAAAAGTGGGCGCGGAATTCGACTCTAGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC  
 GCCATGTTGACATTGATTATTGACTAGTTAATAAGTAATCAATTACGGGGTCATTAGTTTCATAGCCCATATATGGAGTTCGGGTTACATAACTT  
 ACGGTAATGGCCCGCTGGCTGACGCCCAACGACCCCGCCATTGACGTCAATATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCC  
 ATTGACGTCAATGGGTGGAGTATTACGGTAAGTGCCTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCTATTGACGTCAATGA  
 CGGTAATGGCCCGCTGGCATTATGCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCACTAGTATTAGTCATCGCTATTACCATG  
 GTGATGCGGTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTTACTCACGGGATTTCCAAGTCTCCACCCATTGACGTCAATGGGAGTTTGT  
 TTTGGCACC AAAATCAACGGGACTTTCCAAAATGTCGTAATAACCCCGCCCGTTGACGCAATGGGCGGTAGGCGGTACGGTGGGAGGTCATAT  
 AAGCAGAGCTCGTTAGTGAACCGTCAGATCGCTGGAGACGCCATCCACGCTGTTTGGACCTCCATAGAAGACACCGGACCGATCCAGCCTCCGC  
 GGCGGGAAACGGTGATTGGAACGCGGATCCCGTGCCAAGAGTGACGTAAGTACCGCTATAGACTCTATAGGCACACCCCTTTGGCTCTTATGC  
 ATGCTATACTGTTTGGCTTGGGCTTATACACCCCGCTCCTTATGCTATAGGTGATGATAGCTTAGCCTATAGGTGTTGGGTTATTGACCAT  
 ATTGACCACTCCCTATTGGTGACATACTTTCCATTACTAATCCATAACATGGCTCTTTGCCACAACATCTCTATTGGCTATATGCCAATACTCT  
 GTCTTCAGAGACTGACACGACTCTGTATTTTACAGGATGGGTCCATTTATTTTACAAATTCACATATACAAACGCCGTCCCGGTGGCC  
 GCAGTTTTTAAACATAGCGTGGGATCTCCGACATCTCGGTACGTTTCCGGACATGGGCTCTTCTCGGTAGCGCGGAGCTTCCACATCCGA  
 GCCCTGGTCCATCCGTCACGCGGTCTGTTGCTCGGACGCTCCTGCTTAACAGTGGAGGCCAGACTTAGGCACAGCACAATGCCACCAACC  
 ACCAGTGTGCGCCACAGGCGGTGGCGGTAGGGTATGTGCTGAAAATGAGCTCGGAGATTGGGCTCGCACCTGGACGCAGATGGAAGACTTAAGGC  
 AGCGGCAGAGAAGATGAGGCAGCTGAGTTGTTGATTCTGATAAGAGTCAGAGGTAACCTCGTTGCGGTGCTGTTAACGGTGGAGGGCAGTGTA  
 GTCTGAGCAGTACTGTTGCTGCGCGCGGCCACAGACATAATAGCTGACAGACTAACAGACTGTTCTTTCCATGGGCTTTTCTGCACTGACC  
 GTGCTGACCTAAGAATTGAGTATGGCTGCTGTTCTATCACTACCTGCCAGCTCTGCCAGAAGAGCGGTGTTCTGGTGCTTCCACCAAGTCA  
 CTTCAAAGACCCAAAACGTCTGTACTGCAAAAACGGTGGTTTCTCTGCGCATCCACCCGACGGCCGAGTGGACGGGTCCGCGAGAAGAGCGAC  
 CCACACATCAAACTACAATTCAAGCAGAAGAGAGAGGGGTGTTGCTATCAAAGAGTGTGTGCAAAACGGTTACCTTGCTATGAAAGAAGATGGAA  
 GATTACTAGCTTCTAAATGTGTTACAGACAGTGTCTTTTGAACGATTGGAGTCTAATAACTACAATACTTACCGTCAAGGAAATACACCAG  
 TTGGTATGTGGCACTGAACGAACCTGGGAGTATAAATGGATCCAAAACAGGACCTGGGAGAAAGCTATACTTTTCTTCCAAATGTCTGCTAAG  
 AGCTGATCTTAATGGCAGCATCTGATCTCATTTTACATGAAGCTTCTAGGTATCGATCTCGAGCAAGCTAGAAAGCCATGGATATCGGATCCACT  
 ACGCGTTAGAGCTCGCTGATCAGCTCGACTGTGCTTCTAGTTGCCAGCATCTGTTGTTGGCCCTCCCGGTGCTTCTTGACCTTGGAAAGT  
 GCCACTCCCACTGTCTTCTAATAAAATGAGGAAATGCATCGCATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGTGGGGTGGGGCAGGACA  
 GCAAGGGGAGGATTGGGAAGACAATAGCAGGGGGTGGGCGAAGAACTCCAGCATGAGATCCCGCGCTGGAGGATCATCCAGCTAGCAAGTCCCA  
 TCAGTAGTGGAGTTGGCACTCCCTCTCTGCGCGCTCGCTCGCTCACTGAGGCGGGCGACCAAGGTGCGCCGACGCCCGGGCTTTGCCGGGCGG  
 CCTCAGTGAGCGAGCGAGCGCGCCGAGTCTCTTGTGTTGCTCACTCTCAGGCAATGACCTGATAGCTTTGTAGAGACCTCTCAAAAATAGC  
 TACCTCTCCGCGCATGAATTTATCAGCTAGAACGGTTGAATATCATATTGATGGTGATTGACTGTCTCGGCTTCTCACCCTTTGAATCTTTA  
 CCTACACATTACTCAGGCATTGCATTTAAATATATGAGGGTTCTAAAAATTTTATCCTTGGCTTGAATAAGGCTTCTCCGCAAAAGTATTAC  
 AGGGTCATAATGTTTTGGTACAACCGATTAGCTTTATGCTCTGAGGCTTTATGCTTAATTTTGCTAATCTTGGCTTGCTGTATGATTATT  
 GGATGTTGAATCTGATGCGGTATTTCTCTTACGCATCTGTGCGGTATTTACACCGCATATGGTGCACCTCTCAGTACAATC

Fig. 32A

TGCTCTGATGCCGATAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGCTGCTCCCGGCATCCGCTTACAGAC  
AAGCTGTGACCGTCTCCGGGAGCTGCATGTGTGAGAGTTTTACCCGTATCACCGAAACGCGGAGACGAAAGGGCTCGTGATACGCTATTTTT  
ATAGGTTAATGTATGATAAATGTTTTCTAGACGTGAGTGGCACTTTTCGGGGAATGTGCGCGGAACCCCTATTTGTTATTTTTCTAAATA  
CATTCAAATATGTATCCGCTCATGAGACAATAACCTGATAAATGCTTCAATAATGTACCGCTAAGAAGGCGATAGAAGGCGATGCGCTGCGAATC  
GGGAGCGGCGATACCGTAAGCAGGAGGAAGCGGTGAGCCATTGCTTCAGCAATATCACGGGTAGCCAACGCTATGTCTGATAGCGGTCCGCCA  
CACCCAGCGGCCACAGTCGATGAATCCAGAAAAGCGGCCATTTCCACCATGATATTCGGCAAGCAGGCATCGCCATGGGTACGACGAGATCCTC  
GCCGTGCGCATGCGCGCTTGAGCCTGGCGAACAGTTCGGCTGGCGGAGCCCCGTGATGCTTTCGTCAGATCATCTGATCGACAAGACCGGCT  
TCCATCCGAGTACGTGCTGCTGATGCGATGTTTCGCTTGGTGGTGAATGGGAGGTAGCGGATCAAGCGTATGCGCGCCGCTTGCATCAG  
CCATGATGATACTTTCTGGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCGGCACTTCGCCCAATAGCAGCAGTCCCTTCCGCTTCAGT  
GACAACGTGAGCAGCTGCGCAAGGAACGCCGCTGCTGGCCAGCCACGATAGCGCGCTGCCCTGCTTGCAGTTTATTAGGGCACCGGACAGG  
TCGGTCTTGACAAAAGAACCGGGCGCCCTGCGCTGACAGCCGGAACCGGCGCATCAGAGCAGCCGATTGCTGTGTGCGCCAGTCATAGCGGA  
ATAGCCTCTCCACCCAAGCGCGCGGAGAACCCTGCGTGAATCCATCTTGTTCATCATGCAACGATCCTCATCTGTCTTTGATCAGATCTTGA  
TCCCCTGCGCATCAGATCTTGGCGGCAAGAAAGCCATCCAGTTTACTTTGCAAGGCTTCCCAACCTTACCAGAGGGCGCCGAGTGGAATTC  
GGTTCGCTGCTGTCCATAAAACCGCCAGCTAGCTATCGCCATGTAAGCCACTGCAAGCTACCTGCTTCTTTGCGCTTGGCTTTTCCCTTG  
TCCAGATAGCCAGTAGCTGACATTATCCGGGTGAGCACCCTTTCGCGGACTGGCTTCTACGCTGCTCGCTTCTTTAGCAGCCCTTGGCGCC  
TGAGTGTCTGGCGAGCGTGAAGCTGTCAATCCGCGTTAAATTTTGTAAATCAGTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCT  
TATAAATCAAAGAATAGCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAGAAGCTGGACTCCAACGTTCAAAGGC  
GAAAAACCGTCTATCAGGGCGATGGCGGATCAGCTTATGCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCATCAGGCGCTCTCCG  
CTTCTCGCTCACTGACTCGCTGCGCTCGGTGCTGCGCTGCGGCGAGCGGTATCAGCTCAAAAGCGGTAAATACGTTATCCACAGAAATCAGG  
GGATAACGACGAGGAAGACATGCGGCGGCCACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGCGGTTTTCC  
ATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACGAGCGTTTCCCC  
TGGAAGCTCCCTGCTGCGCTCTCCTGTTCGACCCCTGCGCTTACCAGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGC  
TCACGCTGATAGTATCTCAGTTCGCTGAGTTCGCTTCCAGCTGGGCTGTGTGCAGAACCCCGTTACGCCGACCGCTGCGCTTATCCG  
GTAAGTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGG  
TGCTACAGAGTTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGGACAGTATTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAA  
AGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCGCTGGTAGCGGCTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCA  
AGAAGATCCTTTGATCTTTTCTTACTGAACGGTGATCCCACCGGAATTGCGGCCATGTTCTTCTGCGTTATCCCTGATTCTGTGGATAACCG  
TATTACCGCTTTGAGTGAGTGTATACCGCTCGCGCAGCCGAACGACCGCAGCGAGTCAAGTACGAGGAGGAAGCGGAAGAGCGCCCAATACGC  
AAACCGCTCTCCCCGCGCTTGGCGGATTCATTAAATGAGCTGGCGCGCTCGCTCACTGAGGCGCCCGGCAAGCCGGGCGTGGGCGA  
CCTTTGCTCGCCCGCTCAGTGAGCGAGCGAGCGCAGAGAGGAGTGGCCAACTCCATCACTGAT

Fig. 32B

10050485-005450E

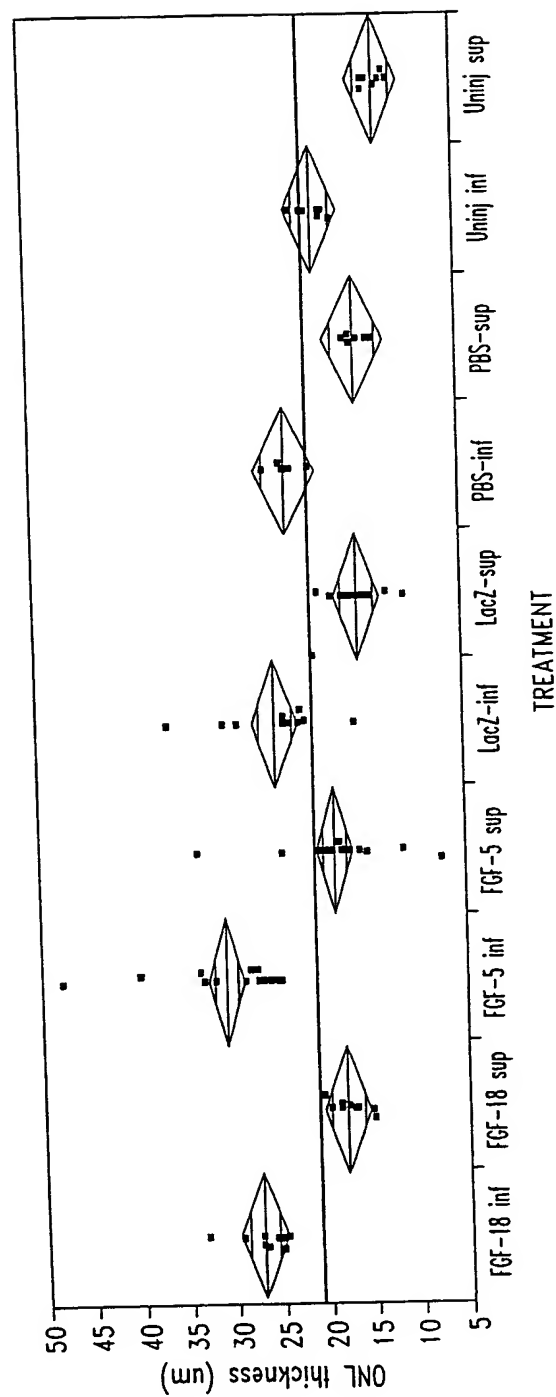
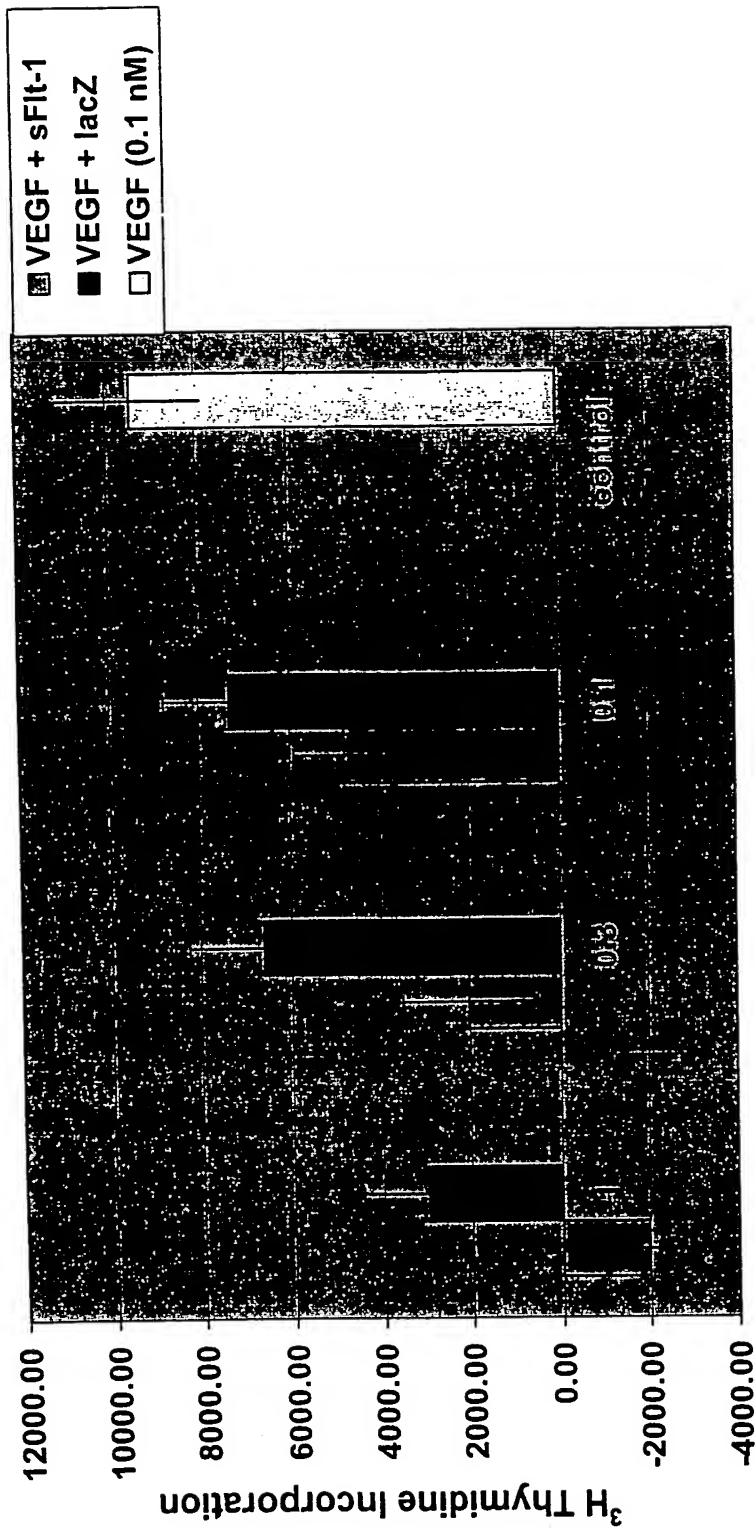


Fig. 33

# Inhibition of HMVEC Proliferation by sFlt-1 rAAV



sFlt-1 Protein in Conditioned Media (in nM)

FIGURE 34

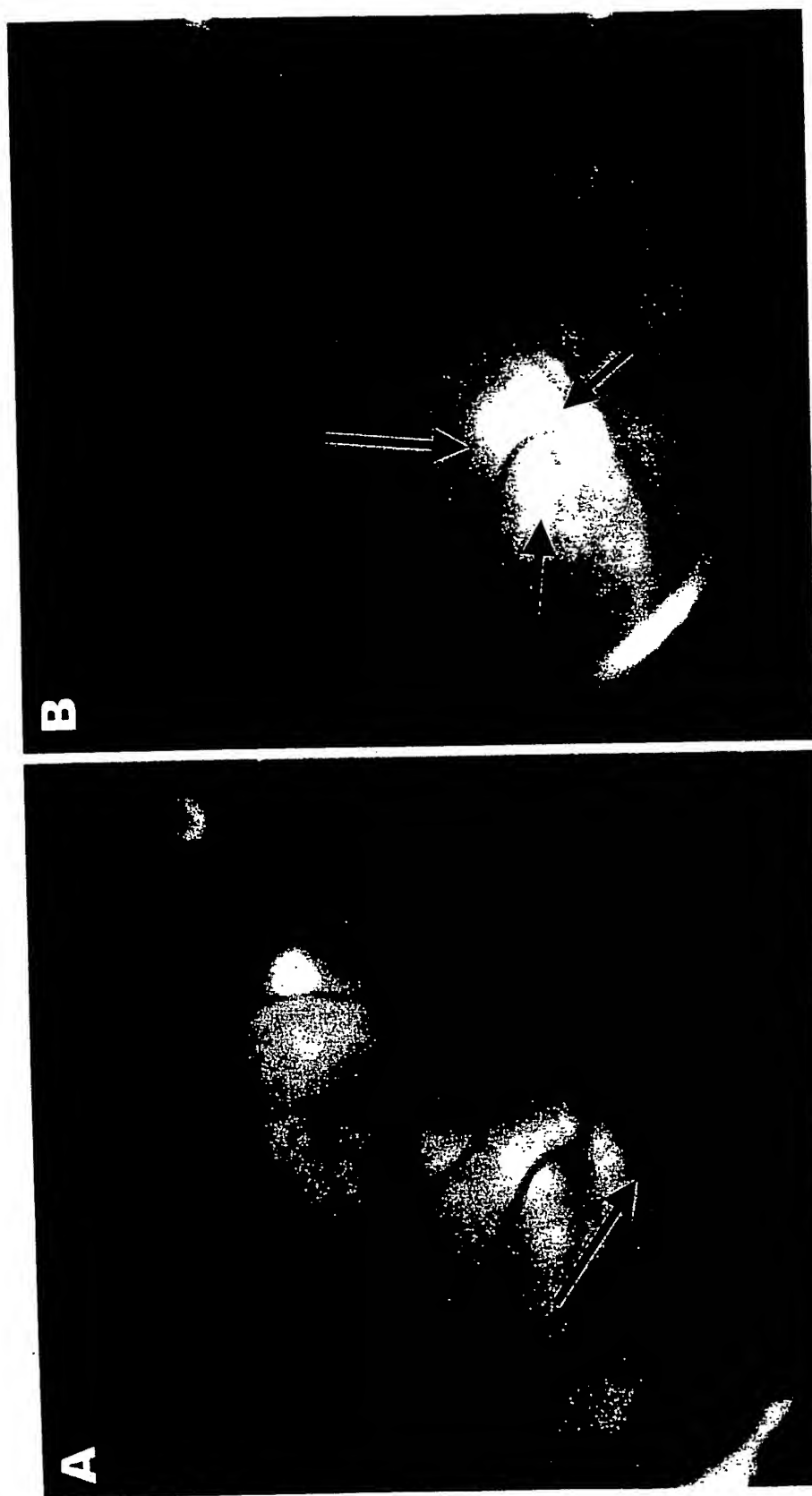


Figure 35. Fluorescein Angiography

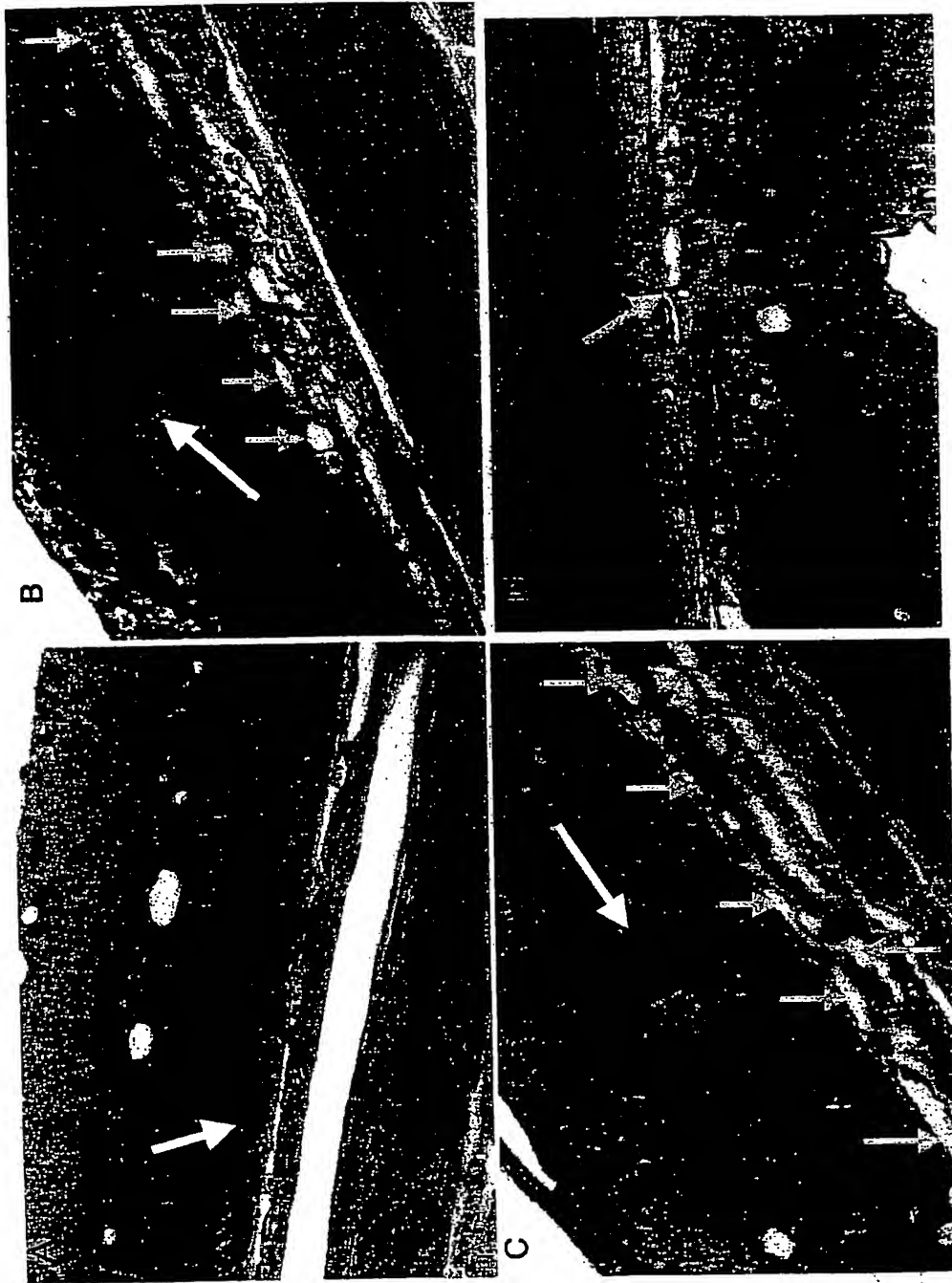


Figure 36. Epoxy Sections

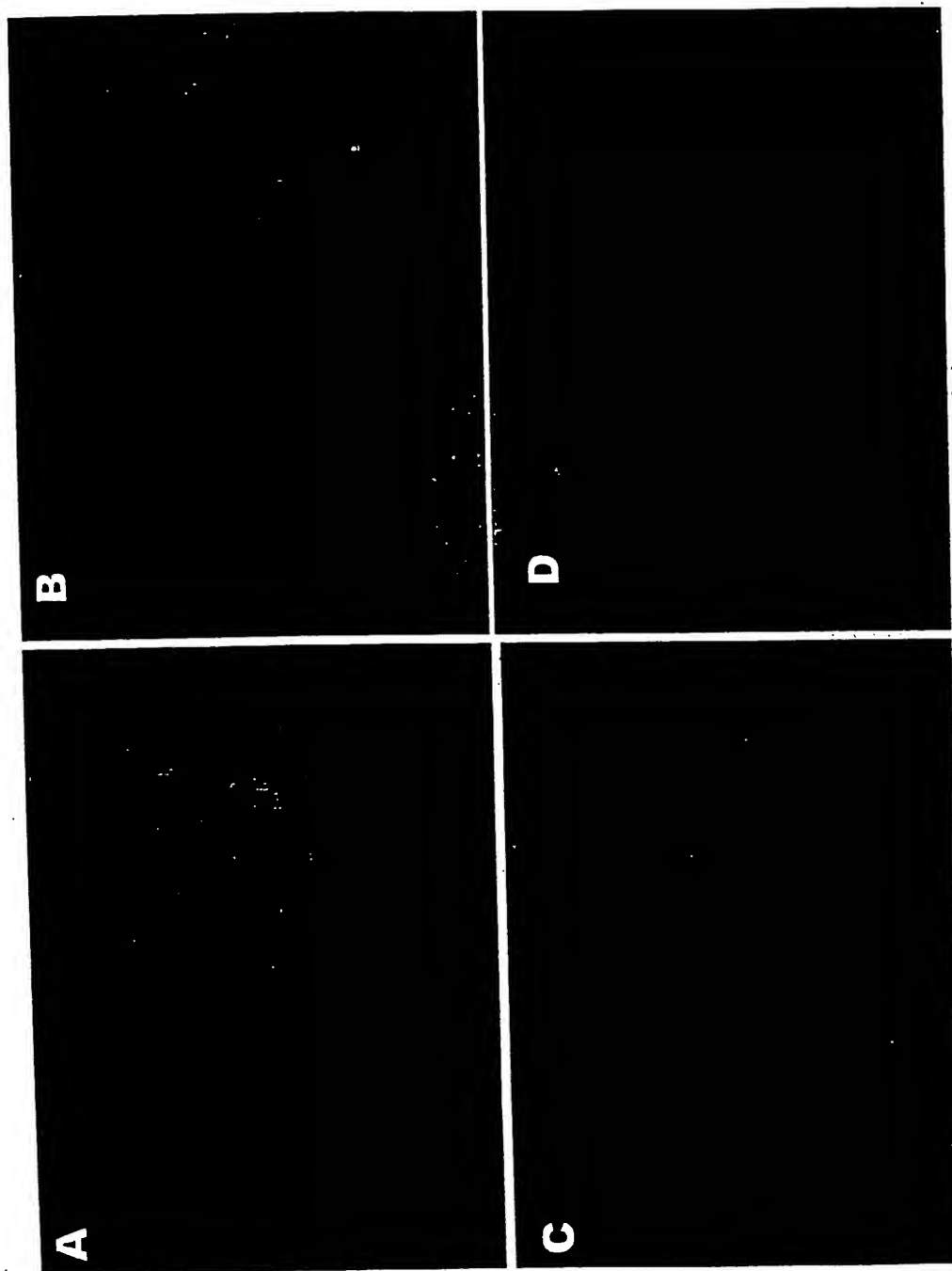
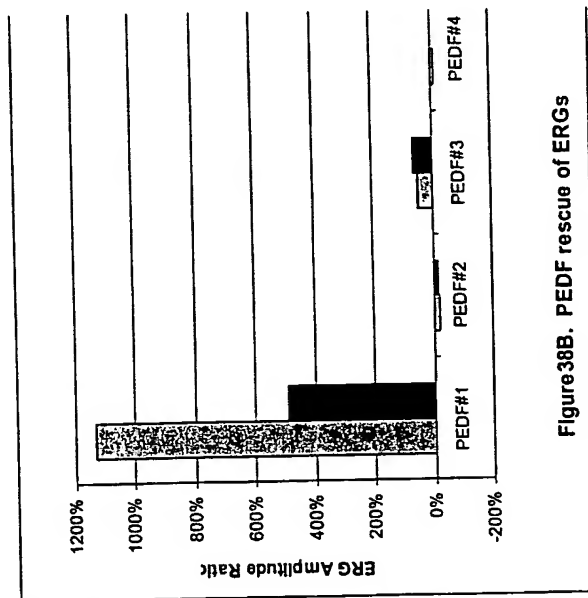
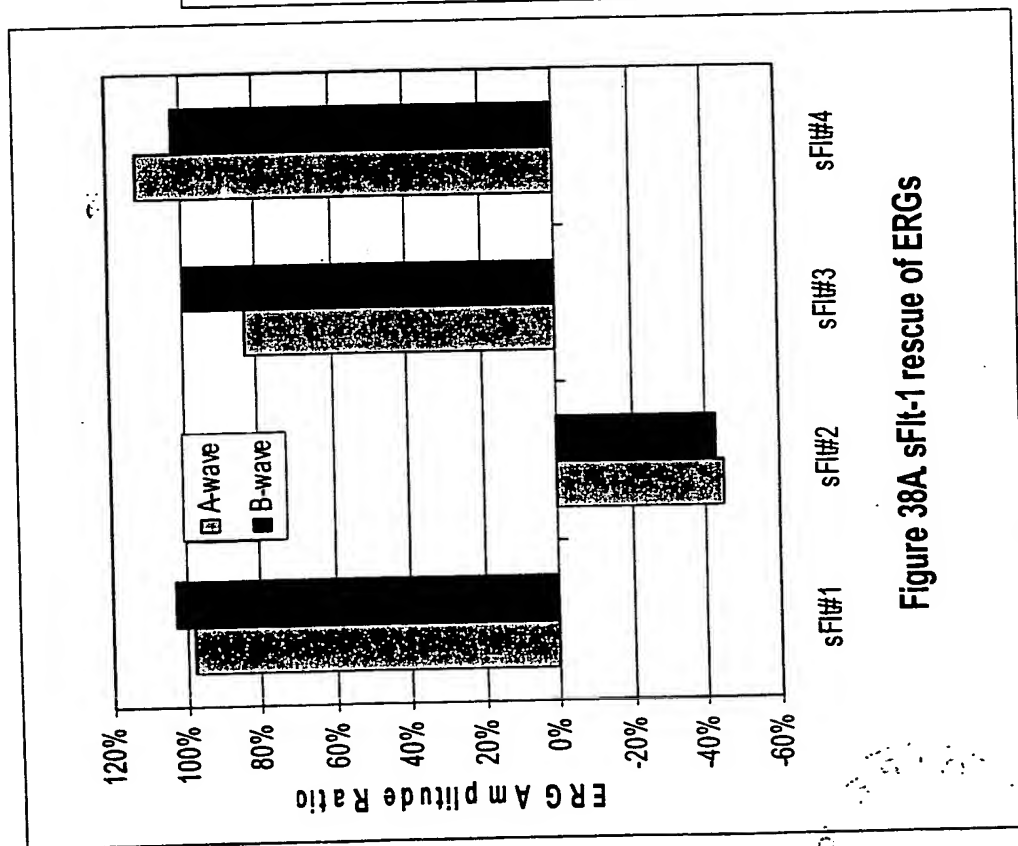


Figure 37. Lectin and BrdU staining





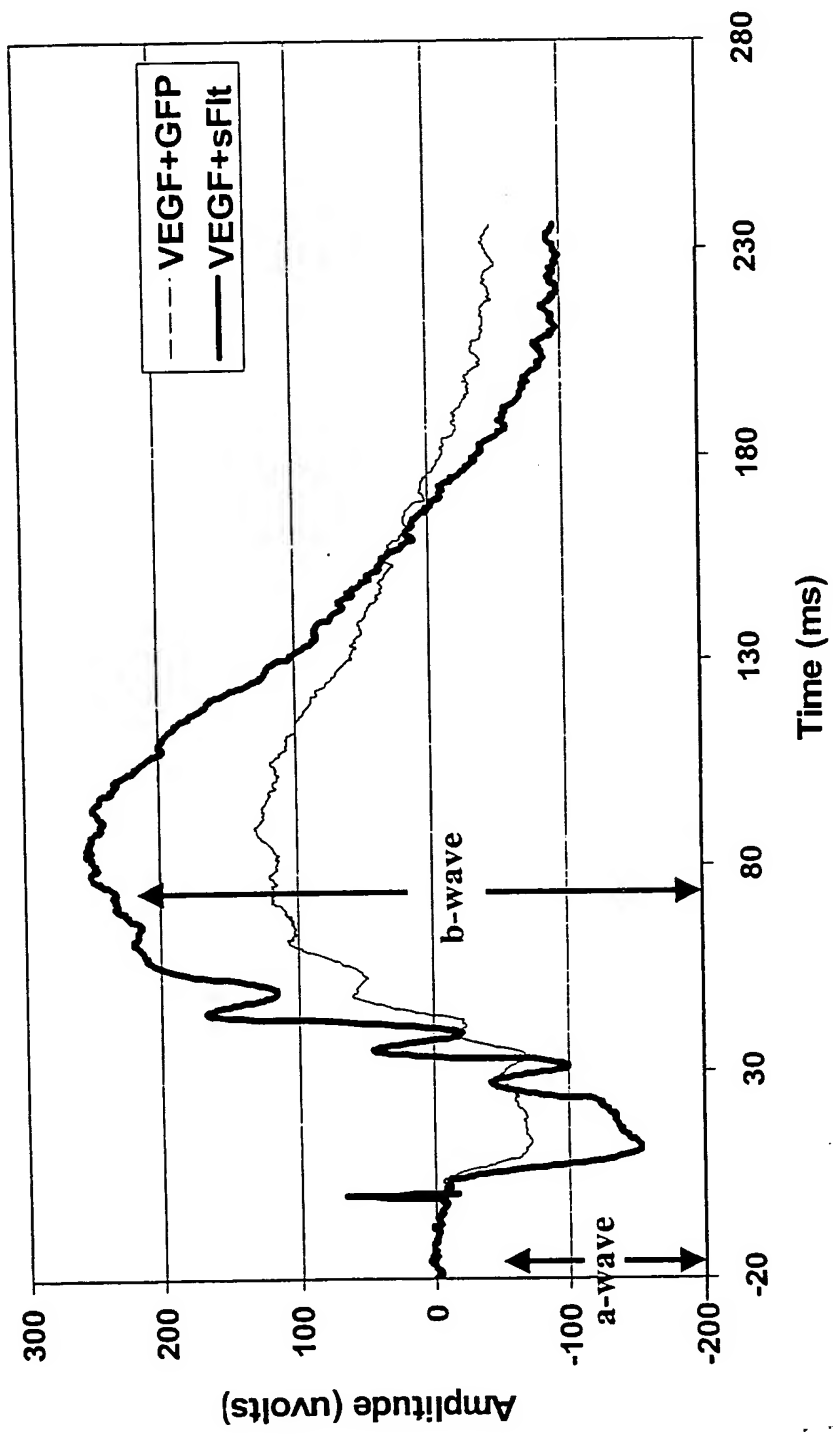


Figure 39. ERG of 070900 Rat#4 on 082300 (6 wk)